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ABSTRACT

Studies are reviewed of issues that potentially inform policies and practices in initial and continuing education, including teacher educators, prospective and practicing teachers as learners, the teacher education curriculum, and the milieu in which teacher education takes place. Across these four areas, mutually reinforcing factors explain why teacher education has been kept from being as academic and intellectual as it should be, and why change has been slow and difficult. The research review indicates that, although a number of academically talented persons pursue careers in teaching and teacher education, persons with limited academic talent are allowed to dominate the field. Studies of the curriculum of initial and continuing teacher education show it to be fragmented, shallow, and overly technical. Institutional policies, structures, and resources that might be expected to foster the quality of teaching and teacher eduction appear to do the opposite. A pattern is revealed which reinforces the maintenance of teacher education as a marginal part of the university and school communities. Significant change in teacher education will be difficult, since reform will have to be orchestrated through attention to a set of complex, interdependent factors. (Author/JD)

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with the assistance of
Judith W. Little
Far West Laboratory

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Co-Directors: Jere E. Brophy and Andrew C. Porter

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Abstract

This paper reviews studies that potentially inform policies and practices in initial and continuing teacher education--studies of those who teach teachers, studies of prospective and practicing teachers as learners, studies of the teacher education curriculum, and studies of the milieu in which teacher education takes place. Across these four areas, mutually reinforcing factors explain why teacher education has been kept from being as academic and intellectual as it probably deserves to be and why change in this enduring situation has been slow and difficult. Although a number of academically talented persons pursue careers in teaching and teacher education, persons with limited academic talent are allowed to dominate the field. As a result, teacher education tends to be easy and non-intellectual. Studies of the curriculum of initial and continuing teacher education show it to be fragmented, shallow, and overly technical. Studies of the teacher education milieu convey one overriding impression: Institutional policies, structures, and resources that might be expected to foster the quality of teaching and teacher education appear to do the opposite. The picture in each of these four areas reveals a pattern which reinforces the maintenance of teacher education as a marginal part of the university and school communities. Teacher education is criticized for its lack of rigor but discouraged from trying to be anything else. The increasingly clear understanding of the problems in teacher education is itself evidence that respectable study can be a part of teacher education. But this understanding also suggests that significant change in teacher education will be difficult, since reform will have to be orchestrated through attention to a set of complex, interdependent factors.

RESEARCH ON TEACHER EDUCATION[1]

Judith E. Lanier[2]

The first Handbook of Research on Teaching (Gage, 1963) does not give chapter status to research on teacher education. Inquiries pertinent to the formal education of teachers are scattered throughout the handbook, with Part III giving more attention than others to teacher education issues and questions. The second Handbook of Research on Teaching (Travers, 1973) does contain a chapter on teacher education, although the authors limit their review to experimental research on the process of teacher education (Peck & Tucker, p. 942). Decisions about which research receives differential attention in chapters such as these are naturally influenced by the authors' overall perspectives on the field. For purposes of this chapter, a more comprehensive view of research on teacher education has been taken than heretofore.

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[1]This paper will appear as a chapter in M. C. Wittrock (Ed.), (in press), Handbook of research on teaching (third edition), New York: MacMillan.

[2]Judith E. Lanier is associate director of the IRT, dean of MSU's College of Education, and acting dean of MSU's Lifelong Education Programs. Assistance in writing this chapter was provided by Judith Little of the Far West Laboratory.

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Author's Perspective and Chapter Content

The view expressed here assumes that the disciplinary basis of research on teacher education is broad and diverse. It assumes that teacher education is a field of multi-disciplinary inquiry, if not in general conception, certainly in execution. It is no longer, and probably never was, the preserve of any one group of professional educators or social scientists. While much of the contribution still comes from psychology, more and more research on teacher education reflects disciplined inquiry that emanates from sociology, anthropology, history, philosophy, and political science. Still another part of the comprehensive view comes from a broad definition of teacher education itself. Concerned with research on teaching prospective as well as practicing teachers, both initial and continuing teacher education is addressed. The staff development and inservice nomenclature is not prominent here, because these concepts are synonymous with continuing teacher education. Similarly, what is often referred to as preservice, precertification, or beginning teacher preparation is here referred to as initial teacher education.

The field of teacher education is recognized here as one whose problems have been generally well known since the turn of the century. Substantial improvement-oriented inquiry and developmental activity has been undertaken since then, although the troublesome circumstances remain basically unchanged. In addition, few people concerned with such matters seem to recognize the enduring nature of the problems. Those who do often become discouraged that "things never change in this field" and abandon their research and improvement efforts. After three-and-a-half years of

research and writing, the director of the Carnegie Study of Education of Educators (Silberman, 1970) made the following observation:

> Teacher education . . . has been the object of recurrent investigation since the end of World War I; indeed, the preparation of teachers has been studied as frequently as the plight of the black man in America, and with as little effect. Since 1920, in fact, ten major studies of teacher education have been published, one of them running to six, another to eight, volumes. In addition, the National Society for the Study of Education, the American Association of Colleges for Teacher Education, the John Dewey Society, and the Association for Student Teaching have each devoted one or more of their annual yearbooks to the question. (p. 414)

The persistent nature of the problems of the field and the investment that has gone into their study is difficult to overlook. For purposes of this chapter, therefore, an effort is made to focus on research that not only chronicles the problems of the field once again, but highlights their enduring nature and furthers understanding of possible reasons why the troubled field is apparently so difficult to change.

This general view interacts with my observation and belief that the study of social entities such as teacher education is apt to be advanced least by adherence to the classic natural science modes of inquiry. Meaningful isolation and control of variables in complex social affairs is rarely, if ever, possible and is not recognized, therefore, as a particularly fruitful line of contemporary inquiry in teacher education.

Given these orientations, I have overlooked or given only passing attention to certain lines of research. There are, for example, a plethora of studies demonstrating that teachers can learn all sorts of things when formally taught. Emanating from an apparently defensive posture, numerous studies show that teacher education can make a significant short-term difference. Many researchers have administered pre- and post-instructional measures of knowledge and attitude in search of some selected change, following one or another instructional treatment. They find, predictably,

that prospective and practicing teachers can indeed "learn new tricks," and master all sorts of subject matter knowledge and skills of the trade. They can learn to be more open-minded about particular subjects and more accepting of certain youngsters. They can come to ask all kinds of questions and to wait more or less time for student responses. They can learn "set induction," "stimulus variation," "transition signals," and all manner of task analysis and objectives preparation--and they can learn such things in more or less efficient ways through a variety of instructional formats.

Few studies of this nature are referred to or included in this chapter because researchers already know that teachers, like other normal human beings, are capable of learning new thoughts and behaviors in ways that conform to a set of generally accepted principles of human learning. It is hardly informative to learn that models and modeling (even if called supervising teachers or demonstration teaching) make a difference and that corrective feedback (even if referred to as coaching) enhances learning. Similarly, it is not surprising that positive and negative exemplars (even if named protocol materials) improve concept acquisition, and practice of newly acquired skills in various contexts (even if called peer or micro-teaching) facilitates transfer. Studies emphasizing these general themes have been systematically excluded. Rather, the emphasis is on better understanding of the chronic problems associated with teacher education, with special attention to potential reasons why they endure.

Organization of the Chapter

A major difficulty encountered in a broad review such as this is finding a suitable conceptual framework within which the many important studies can be usefully described. The problem was compounded by the

diversity of completed work and my desire to go beyond mere summary. It was further complicated by my sense of obligation to address questions about what the cumulative research appears to suggest for educational practice as well as research.

Although the research and practice relationship is complex and indirect in teacher education, it does exist. Therefore, I decided to organize and summarize the research in the context of how and in what ways it might inform not only researchers, but policy makers, professors, administrators, and teachers as well. The claim that the research makes no difference is avoided, as is the claim for decisive influence.

Chapter sections are organized around the heuristic Schwab (1978) provided when he referred to the "commonplaces of teaching." For teaching to occur, someone (a teacher) must be teaching someone (a student) about something (a curriculum) at some place and point in time (a milieu). In teacher education, the teachers of teachers represent a diversity of roles and backgrounds--college professors, graduate assistants, public school supervisors, and others. The students are adults who are either prospective or practicing teachers. The curriculum of teacher education includes studies in general education, subject-matter specialties, and pedagogy. The milieu or context of teacher education includes the general society, the university, the school district, the school, and various other contextual settings that affect teacher education in America. These four commonplaces provide the structure for the remainder of the chapter.

Studying Those Who Teach Teachers

Research on teaching teachers stands in stark contrast to research on teaching youngsters. When teaching is studied in elementary and secondary schools, teachers are considered too important to overlook. But teachers of teachers--what they are like, what they do, what they think--are typically overlooked in studies of teacher education. Researchers aren't even sure, exactly, who they are. While it is known that a teacher educator is one who teaches teachers, the composite of those who teach teachers is loosely defined and constantly changing. The literature suggests that finding and keeping academically strong and committed teachers of teaching is possibly even more problematic than finding and keeping qualified students of teaching. Why this problem endures and yet receives such little research attention deserves consideration.

Problems in Defining the Population: Who are the Teacher Educators?

Teacher educators cannot be concretely identified as a group for either initial or continuing teacher education. To review the research on this commonplace meaningfully, however, the population that would reasonably be the focus of such study must be defined, at least conceptually.

One can assume that teachers of prospective teachers are those persons officially responsible for the design and delivery of the formal instructional program required of those seeking certification for elementary or secondary school teaching. Virtually all such programs contain three major components of academic work: formal course work in general-liberal studies, formal course work in each student's major and minor fields of study, and formal course work in pedagogical study. While the scope and sequence of these studies varies, depending upon whether the initial preparation occurs in a four- or five-year program, the

three-pronged content configuration and general set of training requirements remain similar. The oversight and governance responsibility for teacher education programs is shared broadly across the institution of higher education, emanating from faculty in the various departments that make teaching contributions to these three areas. Thus most university faculty who teach undergraduate students can be considered teachers of teachers, not just those who teach specific education courses.

In this sense, the "Research on Teaching in Higher Education" chapters in this and former handbooks (McKeachie, 1963; Trent & Cohen, 1973) should be referred to for discussion about those who teach undergraduate college students, for they are the primary teachers of teachers. But it would be misleading to leave a consideration of the research on teacher educators to these general references alone, because some of the more interesting aspects of the faculty population concern its specific relationship with the field of teacher education per se.

Questions of professorial identity and commitment. The denotative meaning of the term "teacher educator" would refer to those who provide required college and university course work for prospective teachers. But most professors in the arts and sciences are perceived neither by others nor themselves as teacher educators. The connotative meaning of "teacher educator" would refer to professors of pedagogy, but the course work in pedagogical studies generally represents only about one-fifth of a secondary teacher's required program and about one-third of an elementary teacher's program. Thus the majority of faculty responsible for designing and teaching in programs for prospective teachers would be excluded if the relevant population for study was limited to those teaching pedagogy.

Another connotative meaning for "teacher educator" refers to faculty affiliated with academic units or sub-units that have the word "education"

in their title; yet many faculty in such units do not teach teachers. Many of them teach only students pursuing alternative school-related careers such as administration, counseling, and school psychology. Still others teach only those pursuing non-school, though education-related work in business, industry, government, or higher education. Thus the term "teacher educator" is not synonymous with those appointed to education units; neither is it necessarily synonomous with professors who teach an occasional course in pedagogy.

Identifying primarily with their discipline, the professors teaching foundations courses to prospective teachers (e.g., the psychology, sociology, history, or philosophy of education) tend to deny their teacher education role and identify those who teach methods courses and supervise practice teaching as the real teacher educators. But most professors teaching methods courses would disagree. Identifying with the school subjects of their expertise, they tend to consider themselves science educators or mathematics educators or reading educators, and point to those who coordinate or supervise student teachers as the real teacher educators. Those who supervise field work in the schools are probably the only faculty, as a group, who publicly identify themselves as teacher educators.

The diversity of professional associations that these respective faculty groups join and serve, as well as the professional journals to which they subscribe and contribute, give evidence to the lack of cohesion and identity among the "real" teacher educator population. While the faculty associated with programs that prepare school administrators, counselors, psychologists, and other education specialists, are relatively easy to identify, such is not the case for faculty preparing teachers. Borrowman (1965a) summarized accurately the situation for faculty in

institutions preparing 90 percent of the teachers in America: "In these institutions, the majority of faculty members have an interest in teacher education that is, at best, tangential to their most active concerns" (p. 39).

Questions of identity and responsibility beyond initial preparation. In terms of the continuing education of teachers, things are even more chaotic. Teachers teach teachers, as do principals, consultants from all kinds of state agencies and private firms, curriculum consultants, faculty from institutions of higher education, and, more recently, administrative staff referred to as staff developers. No particular or general forms of training, bodies of knowledge, or understanding of the occupation is currently required for teaching teachers. The definitional problem for researchers who seek to learn more about those who teach teachers is formidable, since teacher education is practically everyone's, and yet no one's obvious responsibility or priority.

Skirmishes and Squabbles Among University Teacher Educators

Professors are noted for carving out and protecting their areas of academic specialization. Elaborate governance procedures guide the discourse and decision-making process in regard to academic program offerings and requirements. Although curriculum and instruction matters rest with the faculty at large, the many specialties and complexities force a division of labor, as scholars defer to one another's expertise. Single academic departments or schools are generally given primary responsibility for their own majors, and faculty in these units usually initiate and determine required and recommended program elements. They also provide guidance and oversight for students' matriculation through their programs. But this more or less standard procedure is not generally followed in teacher education. Since coming to institutions of higher

education, teacher education has operated on the assumption that it should remain an all-university responsibility.

Thus a unique configuration of shared responsibility across departments or schools is generally required, and faculty concerned with teacher education are forced into constant negotiation whenever action is considered. Such negotiations are typically marked by continuing tension among professorial groups, as each seeks to retain control over one or more pieces of the program required of prospective teachers.

Education professors versus other university professors. Although Conant's (1963) major study of teacher certification and teacher training programs is now two decades old, it continues to capture some of the most enduring qualities of undergraduate teacher education. After two years of studying the broad programs of teacher education in 77 institutions across the United States, Conant entitled the first chapter of his report "A Quarrel Among Educators." By doing so he acknowledged the broadly shared responsibility and continuing tension among teacher education faculty in institutions of higher education. Admitting that he began his study knowing from prior experience the hostility felt toward professors of education by the majority of the arts and sciences faculty, Conant completed his work with only modest explanation for the intensity of negative feeling he encountered. Hoping that the tensions were diminishing, he recognized that the quarrel among educators was not over and reported that even when interactions were not outright hostile, the gap between the two groups continued to be wide "in spite of fine words spoken by administrators about an 'all-university approach' to the education of teachers, and the existence of a committee that symbolized the approach" (p.4).

Conant believed that much of the conflict was associated with the classic tension between schools and universities:

> Just as the professors of the academic subjects had not, in general, been willing to assume active responsibility toward the public elementary and secondary schools, they did not welcome the responsibility for the professional preparation of teachers. (p.11)

But he interpreted the conflict primarily in terms of political power. Observing that certification regulations were imposed on the universities and colleges as the result of pressure from a coalition of State Department officials and public school people, he attributed most of the conflict to the academic faculties' resentment of any and all such external coercion. The academic faculties in turn resented the professors of education, whom they associated with the public school and State Department officials.

Yet Conant worried that he had "perhaps stated the issue too simply." He indicated that in some instances, "quarrels ostensibly about teacher education serve to mask more fundamental conflicts over economic, political, racial, or ideological issues" (p. 12), but he did not pursue these possibilities further. Sensitive, however, to the complications that surrounded the ongoing controversies, Conant was harshly critical of condemning slogans such as "those terrible teacher's colleges" or "those reactionary liberal arts professors.

> These slogans invariably represent a point of view so oversimplified as to be fundamentally invalid. This is not to say that either academic or education professors cannot be criticized. It <u>is</u> to say that neither side can be criticized to the exclusion of the other. <u>In the course of my investigations, I have found much to criticize strongly on both sides of the fence that separates faculties of education from those of arts and sciences</u>. (p.13) (emphasis in original text)

Conant was probably correct in suspecting that he had "perhaps stated the issue too simply" when attributing the bulk of the problem to issues of coercive certification, although such issues play a part. More recent

evidence suggests that he may have thought too narrowly about these quarrels in at least two ways. First, the conflicts are not limited to skirmishes between education professors and liberal arts professors; similar battles go on regularly among education professors as well. Second, the fundamental conflicts likely involve a set of more basic ideological issues.

Teacher educators as a breed apart. Although the population of teacher educators is difficult to identify and little research on the full population exists to guide generalization, one commonly recognized principle can be used to focus analysis of related research. There is an inverse relationship between professorial prestige and the intensity of involvement with the formal education of teachers. University faculty and their administrators remain just close enough to teacher education to avoid entrusting it to the "teacher educators," yet they remain sufficiently distant to avoid being identified with the enterprise.

It is common knowledge that professors in the arts and sciences risk a loss of academic respect, including promotion and tenure, if they assume clear interest in or responsibility for teacher education. Professors holding academic rank in education units are in even greater jeopardy of losing the respect of their academic counterparts in the university, because their close proximity makes association with teacher education more possible. And, finally, those education professors who actually supervise prospective or practicing teachers in elementary and secondary schools are indeed at the bottom of the stratification ladder.

Judge (1982) documented the low regard afforded education professors in general and those who work most closely with prospective and practicing teachers in particular. Describing how faculty in the leading American

graduate schools of education sought to "distance themselves from the confused and unattractive world of teacher education" (p. 9), Judge joined a number of researchers who share this observation and have based their research on alternative explanations for the attitude.

Problems of Academic Stratification: Why Disparage Teacher Educators?

While the most salient characteristic of teacher educators is their constant struggle with academic colleagues, their quarrels do not appear grounded in mere disputes over concrete jurisdictional boundaries as Conant suggested. Rather, their differences appear grounded in abstract views of social status, and their antagonism embedded in the traditions and habits of thought associated with being lower class or female. Borrowman (1965) observed, "because of their different experiences, faculty members in teacher education institutions have developed strong biases at such variance with those of their colleagues that compromise provides the only means of achieving cooperation" (p. 41). Research suggests that the "different experiences" and "strong biases" that Borrowman noted several decades ago may well be related to social-class distinctions in the larger society that are simply paralleled in the university.

Differences in academic lives and values. Recognizing that "probably no other faculty is quite so publicly criticized as that of education," and noting how they "stand out as a very different breed of the faculty on most college and university campuses," Prichard, Fen, and Buxton (1971) explored the social-class origins of education faculty for possible explanatory clues. Defining social-class origin in terms of father's occupational level, they found evidence "that a much larger number of incumbents enter the field of college teaching of education from homes of skilled or

unskilled laborers than has been found for incumbents in other areas of academic work."

Drawing their sample from faculty in four institutions of higher learning in the Big Eight Conference and four correspondingly smaller public institutions of higher learning in the same states, they also found that college teachers of education were under-represented by those coming from the homes of professionals, executives, and persons in business for themselves. Examining the age of reporting faculty, they observed that the number and proportion of persons whose parents were unskilled or skilled laborers increased in representation among college teachers of education across time; they concluded that "the education faculty is increasingly being filled by incumbents from this background" (p. 225). Examination of their data on the basis of sex composition showed female professors much less represented than male professors in colleges and departments of education, with females disproportionately representing higher social-class origins. Overall, their findings showed that most college teachers of education were men from lower social-class backgrounds.

In discussing their work, Prichard, Fen, and Buxton noted that the program leading to the career of college teacher of education "seems to have been designed for individuals from the lower classes who aspire to upward mobility but lack sufficient family resources" (p. 220). The doctorate in education can often be completed more quickly than the doctorate in other fields, and such programs are often set up to provide students an opportunity to pursue a livelihood by teaching or administering in elementary or secondary schools while completing much of the required graduate work. Fuller and Bown (1975, p. 29) reported similar observations and, more recently, Ducharme and Agne (1982, p. 32) validated these earlier findings.

Ducharme and Agne also found that most college of education faculty enter institutions of higher learning later than other faculty members in academia, with over 70 percent of them having held full-time teaching positions in elementary and secondary schools prior to their professorial duties. Other researchers have found that the persons most dissatisfied with teaching and most apt to seek alternative, upwardly mobile work in education have been men, regardless of class, and single women from middle- and upper-class backgrounds (Zeigler, 1967, Lortie, 1975). But because the majority of men teachers come from lower class backgrounds to begin with, those who get "up and out" while remaining in education are most apt to be men from the lower social classes who are studying school administration or college teaching in schools of education.

In addition to the differences between professors of education and other university professors in training and career patterns, there are differences in work responsibilities (Fuller & Bown, 1975, p. 29). A large number of faculty in institutions that prepare teachers work with elementary and secondary school personnel in a programmatic framework that requires getting the job done more than it does the pursuit of theory. Such is not the case in the arts and sciences, where faculty work in relative isolation on intellectual pursuits clearly more distant from external constraint and pressures. It is also not the case in other professional schools where field work components are either absent, as in many schools of business, or given primarily to clinical faculty in non-academic departments, as in many medical schools.

Morris' study (1983) of the characteristics and responsibilities of college of education faculty who direct student teaching experiences highlights the practical and non-academic nature of the job requirements for these professors:

> The five most common responsibilities were establishing and maintaining public relations with off-campus personnel, placing student teachers, arriving at final decisions about problems involving student teachers, maintaining permanent records of student teachers and supervising teachers, and conferring with student teacher applicants. (p. 16)

Ducharme and Agne's findings (1982) indicate that faculty in education "have difficulty in adjusting to and accepting the norms and expectations of academe" (p. 33). Using survey and interview techniques, they sampled the views of education professors from a range of institutional types. In response to the question, "What led you to seek a position in higher education?" they found that education professors had light research and scholarship commitments and interests. Their subjects did not respond "in terms of wanting to do research, wanting to be part of the frontiers of knowledge, or wanting to lead and assist doctoral students in their research" (p. 34). Rather, the reported motivation for entering higher education was "to have an indirect impact on the place from which, in general, they have come--the lower schools" (p. 34).

Although Ducharme and Agne (1982) found a reportedly growing interest in writing and publication, Guba and Clark's research (1978) on the levels of research and development productivity of faculty in schools, departments, and colleges of education shows an extremely low record of scholarly accomplishment. Less than 20 percent of the 1,367 education units in higher education had faculty actively involved in education research and development. They found, in fact, that on a per-faculty-member basis, even in the doctoral-level schools, colleges, and departments of education, the productivity norm was basically "non-productivity" (p. 8).

While research suggests, in general, that education professors differ from their academic counterparts in that they have less scholarly productivity and lower social-class origins, one must look further to examine the possibility that these factors are related to one another or to

the quarrels education professors have with other academicians. Comparing their own findings with studies of the relationship between social-class origins and academic careers, Prichard, Fen, and Buxton (1971) cite evidence in support of an observed relationship:

> Our findings, when compared with those of other studies, appear to suggest that where the field of knowledge of the incumbent is one that is largely of application of conative skills, larger numbers of individuals from the lower social classes are to be found than when the field of knowledge is one largely involving the theoretical or cognitive skills. (p. 223)

Drawing upon related work showing a disproportionate representation of middle and upper-middle classes in particular academic fields, these researchers' theoretical basis is tied to cultural background. Supposedly, middle- and upper-class backgrounds emphasize an intellectual atmosphere, emotional control, functional organization of concepts in thinking, use of fantasy in problem-solving, and a lack of indoctrination in cultural concepts. Using this theoretical perspective and their own findings, Prichard and his colleagues argue that these cultural characteristics "contribute to the making of research-oriented people," and "just the opposite occurs for incumbents in such applied areas as college teaching of education where conative-affective modes of behavior are of value" (p. 224).

Other scholars supporting this general view suggest that the relationship between cultural background and theoretical orientation goes beyond a de-emphasis of research. Even if teaching teachers is an applied area of work that includes a valuing of affective modes of behavior, and even if research is eschewed for major attention to the practice component, this may not be sufficient reason for sustained criticism and rejection by one's academic colleagues. Harry Broudy (1980) points out the need to qualify the hypothesis that it is the applied or "practice

component of teacher education as such that undercuts the scholarship requirement of university status" (p. 448). If practice alone were the culprit, then other professional educators would share the image of teacher educators, and it is clear that not all of them do. Broudy (1980) suggests an alternative that indirectly lays the blame on the intellectual propensities and mental processing of teacher educators. He implies that they are excessive in their devaluing of abstract thought and decision making:

> It is only when the practice is highly routinized and demands a very low order of cognitive strain that the academic noses go up. And it is only when the practice seems divorced from a coherent body of theory on which there is considerable guild consensus that the noses stay up. (p. 448)

Teacher educators and the intellectual norms of the university. Several historical studies suggest support for Broudy's hypothesis. Powell (1980) describes the attitude of critics across the generations as professors of education came to focus on job-oriented curricula that were seen as overly practical. Flexner, for example, apparently turned his intellectual and financial influence to the support of teacher education after his successful upgrading of medical education. But he shifted his attitude from one of respect to one of disdain within a decade, when "atomistic training . . . hostile to the development of intellectual grasp" became the norm recommended and studied by professors of education (p. 174).

Historical research also supports the idea that low status, humble social origins, and low-level knowledge and skills are related, and it emphasizes the longevity and tenacity of the problem for teacher education. Mattingly (1975) presents substantial evidence that persons concerned with the education of teachers in this country struggled to uncouple these factors when schools were first created to prepare

professional teachers approximately 150 years ago. Mattingly's study describes the early struggles of education faculty in the independent normal schools who sought to construct and maintain academically respected programs of teacher education. He suggests that their battle was a losing one because the attitudes and habits of thought associated with sex and social class had an excessively strong influence.

Mattingly describes how early attempts to have professional schools for teachers reflect specific attitudes of intellectual discipline and self-possession were displaced as women and members of the lower social classes came to compose a majority of the teaching force. Even the most academic normal schools, such as the four-year program at Bridgewater, Massachusetts, became consistently less attractive over the years as young men from the upper social strata gravitated to liberal arts colleges. The small minority of males and the four-year course of professional study was basically eliminated by 1900. Left for women who would teach in elementary schools, the two-year normal schools became both the norm and the bottom rung of the academic ladder. Mattingly (1975) describes the poignant curriculum shifts that accompanied this change in student body:

> At the turn of the century normal schools had been overtaken by women and by vocational training for specific skills. The curriculum had quickly lost its pretense of academic training and had gained methods which collegiate minds deemed unprofessionally mechanical. (p. 166)

Powell's historical analysis (1976) of "University Schools of Education in the Twentieth Century" supports Mattingly's observations. Describing the movement toward the university and the creation of schools of education in these settings, he noted their class and sex bias as it related to substantive complexity:

> High school men wished to avoid the normals' low admissions standards and growing accessibility to persons of low social status, their emphasis on practical technique, and their rapid femininization. (p. 5)

Leading educators in 1890 believed that the establishment of teacher training opportunities in higher education, and especially in the best universities, "would raise it at once to the ranks of a learned profession, worthy to command the best talents and the loftiest intelligence, and to be entered only, like law or medicine or theology, after the amplest professional training" (Powell, 1976, p.5). But those who avoided the normal schools and came to the university to find greater dignity and respect for themselves, teaching, and teacher education, were disappointed. Expanding enrollments in the nation's schools prevented the recruitment and selection of the most elite and intellectually able into teaching, and necessitated the continued employment of women and lower-class males. Recognizing that respect would remain elusive for academically talented, upwardly mobile men so long as they continued as members of groups dominated by others of low status, education professors in the nation's leading universities sought and found an alternative means of resolving the problem of finding "positions of honor, responsibility, and authority in teaching" (Powell, 1976, p.4). They changed the priority mission of schools of education from that of improving teacher education to that of preparing an elite minority who would become the managers of the lower-status majority. Women and less able men, who would necessarily comprise the massive teaching force, could continue to receive a meager and technical preparation; the career educators, with responsibility for management and important decision making, would receive the more thorough and substantive professional education (Powell, 1976, 1980).

Powell (1976) describes how courses and programs evolved as graduate study was developed for the more "successful and ambitious teachers who

look forward to promotions as principals and superintendents" (p. 7). Typically, only experienced male teachers were able to acquire the "training they needed to compete successfully for all the higher positions in the profession." He captured numerous arguments and events that led academic leaders and ambitious education faculty to shift their primary commitment from teacher education to nonteaching careers-- careers that focused on specializations and management roles rather than teaching itself.

Apparently, education faculty at the university segregated themselves very early into training programs that reinforced the emerging hierarchical structure of the teaching profession. Powell uncovered, for example, a 1905 issue of the New England Journal of Education that spoke of growing uneasiness with the "class-conscious" character of the emerging divisions, but reported "no solution to this apparent inevitability." Such historical evidence supports the growing awareness of stratification and the expectation that serious thinking and decision making in education was to be carried out by male members of the middle and upper classes.

Mattingly's evidence (1975) also makes a persuasive case that even before the turn of the century, critical thinking and conceptual analysis and argument were selectively excluded from deliberations and constructions of the education curriculum for professional teachers. Such changes accompanied the sex and class shift in the majority membership of the teaching population. Illustrating the subtle but important changes that occurred in the norms for intellectual exchange and cognitive processing at the time of these shifts, Mattingly contrasted how differently the first and second generations of leading teacher educators thought about their work. An exemplary case in point relates to both generations' strong and shared view that social conflict and political partisanship were detrimental to professional character:

> The first generation, however, differed on the point in that they knew the apolitical meaning originated from a political choice. The second generation and its successors made a habit of their apolitical thinking and treated the habit as a moral principle. (p. XIII) (emphasis added)

Cognitive complexity, self-direction, and teacher education. The accumulated research suggests an interesting possibility. The reciprocal effects of personality and job conditions for those most closely associated with teacher education may have affected selective recruitment, selective retention, and, subsequently, formation of intellectual propensities and working norms that conflict with the traditional values of higher education. Such a possibility would help explain the observed tension, as well as the disdain for and avoidance of teacher education by serious scholars both internal and external to schools of education.

Faculty in institutions of higher education are expected to value intellectual challenge, questioning, criticism, and conceptual analysis. Advancing higher learning requires that scholars enter uncharted intellectual territory, and, as they explore the not-yet-known, they must maintain a cognitive flexibility and commitment to examine alternative, sometimes competing beliefs and assumptions. Diverse views and openness to new evidence, novel ideas, and controversial opinions are long-accepted values of the academy. Conversely, the tendency to ignore or reject competing ideas and evidence, to accept old or new ideas uncritically, or to proselytize unexamined truths are signs of academic weakness. Evidence suggests that the typical lineage of teacher educators has not prepared them to appreciate the traditional values of higher education. As Mattingly (1975) observed, "For very particular reasons the institutes of Barnard's generation attracted young men whose prominant virtues were neither intellectual self-possession nor professional daring" (p. 70). These "very particular reasons" include personality factors and job conditions that influence cognitive values and flexibility.

Personality factors associated with cognitive propensities rewarded in higher education also correlate with social stratification. Apparently, social class has a powerful influence because it represents the combined effects of child-rearing, formal education, and occupation (Kohn, 1969). Kohn and Schooler's recent findings (1982) require serious attention, as they "highlight the centrality for job and personality of a mutually reinforcing triumvirate--ideational flexibility, a self-directed orientation to self and society, and occupational self-direction" (p. 1282).

Studying class-associated conditions that affect psychological functioning, Kohn found conformist values in child-rearing stressed in the lower segments of the class hierarchy and more so for females than males (1969). These conformist values include a predisposition for authoritarian conservatism and other-directedness. Because most teacher educators, like teachers, are either women from middle-class or men from lower middle-class backgrounds (Fuller & Bown, 1975, p. 29), it is likely they learned conformist values as children.

The formal educational component is similarly important, insofar as it provides, or fails to provide, the intellectual flexibility and breadth of perspective so crucial to self-directed values and orientation (Kohn & Schooler 1982). The school experiences of those gravitating towards teacher education also tend to reinforce conformist values, however. Elementary and secondary schools have encouraged girls, some of whom eventually become teachers and teacher educators, to be passive, primarily followers (Pyke, 1975). Formal education has emphasized domestic roles for women in America since the nineteenth century; and while the traditions of female education are now changing, they have long de-emphasized intellectual prowess (Kaestle, 1983).

Studies by education sociologists also highlight the ways in which schools inadvertently contribute to the limited cognitive flexibility that children from economically disadvantaged homes bring to school. Murphy (1979) summarizes the research of a number of these scholars, whose studies suggest that teacher educators, as children of the working classes, were discouraged from developing substantive, ideational flexibility during their elementary and secondary school years.

Bordieu, for example, demonstrated an association between inequalities in the culture capital of parents from different economic backgrounds and inequalities in the school success of their children. Lower class students have less of what Bordieu calls culture capital, the ethos of the upper classes. Lacking the verbal facility, general culture, and information about the school system that brings the greatest school returns, these students simply end up with a lower quality education than their more privileged counterparts.

Perrenaud also examined sociocultural stratification and inequalities in the school success of children. Taking institutions and structural arrangements into account, he demonstrated how course, school, and program placement decisions aggravate these inequalities. Investigating these mediating variables further, Baudelot and Establet found curriculum and instruction differences also contributing to class distinctions. Moralistic and utilitarian views of knowledge encouraging conformist values and cognitive passivity were emphasized for working class children. Children of the upper classes, on the other hand, were encouraged to value and develop more abstract thinking through music, art, pure science, mathematics, philosophy, and other studies that reinforce cognitive flexibility. Studies affirming (Anyon, 1981; McNeil, 1982) and questioning (Rehberg & Rosenthal, 1978) these generalizations continue to

emerge, but a body of literature exists to suggest that schools reinforce the cognitive flexibility of those from upper-class families but fail to change the conformist, other-directed thinking of those from lower-class origins.

The evidence is not as convincing at the college level, but there is reason to believe that the higher education obtained by teacher educators has not been highly liberating, at least not in a way that would counter family-nurtured and school-reinforced tendencies to value cognitive conformity. Coming from modest social backgrounds, many prospective teacher educators complete their baccaulerate studies at the college nearest their homes. With monetary constraints imposing their inevitable restrictions, opportunities for rich experential learning are, again, frequently limited.

In addition, the non-liberating nature of most undergraduate education has been criticized by scholars who have written about liberal education in the modern American university (Bestor, 1955; Borrowman, 1965a; Conant, 1963; Schwab, 1969; Silberman, 1970; Trow, 1968; and Wegner, 1978). Most teacher educators did not obtain a liberating education in their own homes or schools and it is unlikely that they found it in their baccaulerate program. In addition, because most teacher educators who work closely with prospective and practicing teachers went through teacher preparation programs themselves, they likely encountered conservatively conceived studies in pedagogy. Writing in his documentary history of Teacher Education in America, Borrowman (1965a) speaks of the relationship between "Liberal Education and the Preparation of Teachers." He describes the dominant normal school emphasis on excessive technicalism, noting that although it runs contrary to the ideals of a liberal education, it has been carried over in the minds of many who still teach teachers:

> Important leaders in American teacher education have their roots planted firmly in the normal-school tradition, large numbers of elementary-and secondary-school teachers retain the values inculcated by the normal schools, and a number of ideas central to the normal-school tradition have been institutionalized in university programs of teacher education. (p. 20)

Teacher educators might yet encounter opportunities to develop breadth of perspective, tolerance of non-conformity, and intellectual flexibility in their occupation and graduate studies. But here again, teacher educators generally acquire conservative, conformist orientations. Ducharme and Agne (1982) found that the majority of education faculty have worked three or more years in the lower schools, findings that are consistent with those of other studies (Prichard, Fen, & Buxton, 1971; Joyce, Yarger, & Howey, 1977). The conservative nature of school settings has been well documented (Cusick, 1973; Everhart, 1984; Willis, 1980), and studies of the professionals who gather there show a conservative bias (Zeigler, 1967; Lortie, 1975). These institutional traditions, collegial relations, and the structural requirements of teaching combine to create a pervasive atmosphere of conservatism.

Studies confirm the strong impact of job conditions on psychological functioning. According to Kohn and Schooler (1982), "jobs that limit occupational self direction decrease ideational flexibility and promote a conformist orientation to self and to society" (p. 1281). Job conditions that lead to self-directedness, on the other hand, are substantively complex; they include opportunities for reflective thinking, independent judgment, and initiative, and they are recognized for their non-routinized activity and freedom from close supervision.

It is unlikely that the traditional structures of elementary and secondary teaching provide school teachers aspiring to careers in teacher education with sufficient opportunities to overcome existing tendencies

toward other-directedness. Consequently, these prospective teacher educators have little opportunity to develop a self-directed orientation to self and society. If elementary and secondary school teaching provided more occupational self-direction than it traditionally has, prospective teacher educators would move closer to orientations that are "consistently more likely to become nonauthoritarian, to develop personally more responsible standards of morality, to become self-confident, ...less fatalistic, less anxious, and less conformist in their ideas" (Kohn & Schooler, 1982, p. 1272). But classroom teaching in the United States is not known for furthering complex intellectual development in the adults who work there (Lortie, 1975).

Similarly, the chances of encountering significant changes in cognitive habits during graduate school are little better. The financial constraints associated with humble family origins and low teacher salaries provide few opportunities for taking time off work in the pursuit of full-time graduate study. Full-time study would provide teachers with increased opportunity to become immersed in academic work, with its greater potential for intensive and deep exposure to new and stimulating ideas. In addition, possibilities of acquiring substantial external support from other sources, such as federal grants, university stipends, national fellowships, and business awards is low. The field of education receives far less money by a wide margin than other academic and professional fields for graduate student support (Pelikan, 1983, Table 4). Most aspiring teacher educators are forced to maintain their normal, other-directed school routines, therefore, while pursuing graduate studies part-time at a nearby state university. The pattern of contextual reinforcement for conformist values and narrowness of perspective is repeated once again.

Thus the research on experiential factors associated with cognitive complexity and self-direction, combined with what is known about the lives of teacher educators who work closely with prospective and practicing teachers, suggests that their intellectual propensities may be less analytical than those traditionally held in high esteem at the university. Recently, more direct study of university supervisors has confirmed the frequent presence of this more narrow, unquestioning perspective. Reviewing the work of Stones and Morris (1972) and MacAleese (1976), Stones (1984) found supervisors to be "extremely unlikely to have given thought to the theory and practice of supervision"; he summarized findings on the methods of contemporary supervision as "atheoretical, idiosyncratic, poorly conceptualized, of doubtful efficacy, and in some cases probably harmful" (p. 1). Other researchers pursuing similar questions on the thinking of those who teach methods classes and practice teaching have observed similar results. A lack of probing thought and analysis, the trademark of cognitive conservativism, seems to characterize the intellectual performance (Hogan, 1983; Katz & Raths, 1983; Zeichner & Tabachnick, 1982). The social backgrounds and occupational experiences encountered by many teacher educators are likely contributors to this non-academic orientation. Significantly enriched intellectual opportunities for prospective and practicing teacher educators, in contrast to more condemnation and harsh criticism, can lead to constructive remedy of the problems here observed.

Summary: Research on Those Who Teach Teachers

The body of research leading to better understanding of those who teach teachers is modest at this time. A broad search of the literature

and a weaving together of circumstantial evidence was required as part of the sense-making task called for in a review of this nature. The difficult-to-locate, easy-to-overlook, and much-maligned nature of the teacher educator population lies behind the questioning perspective brought to the research studies considered in this section.

Of those responsible for teaching teachers in higher education, the most prestigious are those most removed from dealing with teacher education's problems. The thesis emerging from the research is that variables associated with social class distinctions in the larger society are simply mirrored in universities and again in colleges and departments of education. Those variables are potentially of major importance in understanding the intellectual character and social position of those most closely associated with teaching and teacher education.

A disproportionately large number of faculty teaching teachers most directly have come from lower middle class backgrounds. It is very likely that they obtain conformist orientations and utilitarian views of knowledge from their childhood experiences at home, educational opportunities in school, and restrictive conditions of work as teachers before coming to higher education. Thus the teacher educators closest to schools and prospective and practicing teachers often assume professional work assignments and routines that demand minimal intellectual flexibility and breadth and require, instead, conformity and limited analysis. Such possibilities may partially explain why teacher educators, as some researchers have observed, "have difficulty in adjusting to and accepting the norms and expectations of academe" (Ducharme & Agne, 1982, p. 33).

The students of teacher education also have difficulty adjusting to and accepting these academic norms for many similar and some additional

reasons. The school as workplace, because it is their only workplace, has an even greater impact on them than on their teachers.

Studying the Students of Teaching

Of the four commonplaces in teacher education, the students receive most attention. The student group comprises adult learners who seek formal preparation for teaching as well as those who enter teaching and become participants in various forms of continuing teacher education. More tangible than the curriculum and milieu of teacher education and certainly less threatening to study than their teachers, learners remain the primary subjects of inquiry. Lacking in power, the adult students are more readily available for study and less able to express resistance when studies of them are poorly conceptualized or interpreted.

The research on students of teaching over the past decade tends to be desultory in nature, poorly synthesized, and weakly criticized. Although there has been a good deal of data-gathering and thought, there seems to be an excess of the former and a dearth of the latter. As a consequence, misrepresentation and overgeneralization of research findings has occurred in response to growing public interest. A serious need remains for improved study and scholarship.

Appropriately, however, research on prospective and practicing teachers is increasingly concerned with the teachers' intellectual competence, factors that influence their thinking abilities, and the substance and processing of their thoughts and judgments. This evolving paradigmatic shift is illustrated by the earlier handbooks' focus on research on personality and other personal qualities (Getzels & Jackson, 1963) and on behavioral performance (Peck & Tucker, 1973).

Growing researcher interest in the cognitive functioning of prospective and practicing teachers has also been accompanied by public concern (Gallup, 1983). Contemporary dissatisfaction with the intellectual performance of America's students and teachers has filled the popular press as studies reporting low test scores and other school problems have renewed interest in the qualifications, competencies, expectations, and attitudes of those who teach. But contemporary interest by no means accounts for the increased research along these lines. As in all teaching situations, the composition and nature of the student group influences the nature of the teaching that occurs and accounts for a major part of the variance in learning outcomes. The cognitive processes of those choosing to become and remain teachers is and will continue to be an important area in teacher education research, therefore, even when contemporary concerns about quality subside.

Problems in Thinking about the Population: Simple Demography

The students of teaching are generally studied as members of two large groups: adult learners enrolled in higher education programs leading to recommended teaching credentials and practicing teachers receiving formal instruction meant to improve elementary and secondary education. The statistical reports of the National Education Association (1982) and the National Center for Education Statistics (Frankel & Gerald, 1982; Plisko, 1983) provide informative descriptive data, as do the synthesizing reports of Feistritzer (1983a, 1983b) and the demographic studies of Sweet and Jacobsen (1983).

But few studies place their findings in juxtaposition to comparable findings emerging from studies of meaningfully related populations. Such comparisons and contrasts are needed if misleading interpretations are to

be avoided and more trustworthy perspectives created. Studies are cited, for example, showing a steady decrease in teachers' reported certainty in willingness to choose teaching if they could remake their career choice and a steady increase in teachers saying they probably or certainly would not choose teaching again (NEA, 1982, p. 74). Such data would be interpreted differently if the two-decade change described for teachers was isomorphic with comparable response distributions for dentists, accountants, and business managers over the same period.

Another example of insufficient analysis is found in recent studies showing fewer women with high test scores entering teaching. Although the women's movement is often cited as the major contributor to the problem (Kerr, 1983; Schlechty & Vance, 1981), it may have had only modest effects until recently. To be sure, the women's movement provides alternatives to teaching, but it is also responsible for encouraging and enabling twice as many women to pursue careers requiring a college education as did so just fourteen years ago (Astin, 1981). The more likely culprits are actual and rumored market demand, whose powerful influence would cause greater talent shifts than at present if it were not for the alleviating, as opposed to exacerbating, effects of the women's movement (Weaver, 1983, p. 46).

With some notable exceptions, the demographic studies and descriptions of the student group do not include contrasting alternative portraits and interpretations of the population's unique characteristics important to improved understandings and expectations for America's teachers, qua learners. While some aspects of unique student qualities can now be considered, future research is seriously needed if teacher education policies and practices are to be significantly better informed.

Taking size for granted. Although a number of researchers have counted prospective and practicing teachers and others have cited their

numbers, few bring informed perspective to the figures. Sweet and Jacobsen (1983) at least consider the teacher work force as part of the college-educated work force, noting that "In fact, a surprisingly large share of all college-educated workers are school teachers" (p. 192). But they do not report that even with rapid growth in the college-educated work force, teachers still accounted for more than 7.5 percent of this total group as recently as 1982 (Feistritzer 1983b, Table 12). With over 10 percent of the college-educated working women and over 4 percent of the college-educated working men, the occupation represents the largest single white-collar group in need of regular continuing education. As Lortie observes: Teaching is unique. No other occupation can claim a membership of over two million college graduates and tens of thousands with advanced degrees (p. 244).

The prospective teacher group, though reduced from earlier years, also remains formidable in size. Across the 1970's, between one-fifth and one-quarter of all college graduates in the country pursued teaching certificates (Frankel & Gerald, 1982). While bachelor's degree recipients in education declined to 12.7 percent in 1980 (Frankel & Gerald, 1982), education continued to rank second, behind only business and management, in total degrees conferred (Feistritzer, 1983a, p. 48). Over 265,000 bachelor's and master's degrees were granted to education majors in 1970, and approximately 222,000 in 1980.

The number of practicing elementary and secondary school teachers went well over two million in 1980, increasing by 1.4 percent across the 1970's, even while the number of pupils was dropping (Feistritzer, 1983a, p. 1). Though the number of teachers is predicted to increase by several hundred thousand by 1990 (Frankel & Gerald, 1982), projections indicate an annual need of almost 200,000 new teachers each year. The anticipated

supply and demand situation is now comparable to that of the 1965-1969 period (Plisko, 1983, p. 76), when a serious teacher shortage existed. But these now-familiar numbers need more thought and consideration if the interpretations and generalizations flowing from related research on the learners are to be understood.

Consider, for example, reports that the students of teaching do not come from among the best and the brightest of the college population. Such reports are clearly misleading because many academically talented students continue to pursue careers in teaching. Whether enough of them do is a matter for analysis and judgment; but reasonable and realistic recruitment goals cannot be established until the total available talent pool is first compared with the size of the needed population and the observed proportion taken into account.

As Lortie (1975) notes, "Occupations compete for members, consciously or not, and there is a largely silent struggle between occupations as individuals choose among alternative lines of work" (p. 25). Further, the occupational struggle is not influenced by job attractions alone, because the distance down the normal curve of academic ability that must be traveled to meet the overall demand is a function of size. If a small population is needed, aspirations to obtain recruits from the very top can be realistic. As an occupation grows from 200, to 2,000, to 20,000, or to 200,000, the goal of getting recruits from the upper quartile of the college population becomes increasingly difficult.

The extent of the difficulty can be observed by looking at the 1980 year alone, when 186,000 of the 930,000 bachelors degree graduates were in the upper quintile (Table 4.3, Plisko, 1983). If the entire talented cohort pursued teacher education, and if even 80 percent (Table 4.6, Golladay & Noell, 1978) sought jobs, there would still be a shortage of

more than 30,000 teachers in light of the estimated demand for 152,000 (Table 4.2, Plisko, 1983).

The size of the student group also influences the qualitative nature of instructional programs provided for learners. Effective small-group work and personalized tutorials and clerkships necessarily become costly with greater numbers. Sizable populations provide an understandable press for less effective instructional formats that can accommodate large groups.

Group size also affects general awareness and public visibility. When even a small percentage of a large population suffers a problem like unemployment or an indignity like low test scores, it represents a relatively large absolute number. Thus even if the situation does not characterize the population as a whole, or even a significant majority, it will accurately portray reality for a substantial number. While descriptions of important characteristics of large population subsets are needed, the failure to emphasize an actual minority status when it fits many people is a common human oversight, particularly when the oversight has functional value. Proportionally small, disaffected subsets of large populations can thus obtain disproportionate amounts of attention, which in turn leads people to inappropriately think these subsets characterize the whole. An example of this phenomenon for the large teacher population over the past decade appears related to supply and demand.

Except for several unique time periods, such as the Great Depression, and particular subject fields, such as secondary social studies, jobs for teachers in the United States have been plentiful, and teachers could usually find work wherever they wanted to live. This circumstance changed across the past decade as large numbers of certified teachers, though not necessarily a large proportion, found employment less readily accessible.

The illusion was created that there were few available jobs for teachers, and teacher education was naturally affected. Weaver (1983) provides some perspective:

> The effect on schools of education was dramatic. The percentage of college-bound students selecting teacher education fell from its 1969 peak of 24 percent to less than 5 percent in 1982. These kinds of responses, however, are not uncommon. Engineering enrollments declined by almost one-third in the aftermath of the engineering glut of the 1969-71 market. (p. 82)

Weaver (1983) has discussed ways in which "these adjustments in opportunity and career choices also affect talent flows and institutional responses" (p. 82), helping to explain why another period of high demand now appears on the horizon. But there is reason to believe that the nation's teacher surplus of the past decade was not as severe as the public thought. The strong sense that a teacher-glut existed may have been a reaction to a modest proportion, though large number, of teachers facing new occupational norms for position identification, job competition, and relocation. College graduates from most fields of study anticipate the need to compete, search widely, and possibly relocate in a less-than-preferred geographic location. Further study is needed to explore the possibility that disruptions in traditional market expectations for a segment of the teacher group over-influenced supply and demand perceptions of the past decade.

There is no question, however, that teacher surpluses in particular subject fields and locations caused tight job markets in certain areas, just as declining public school enrollments forced layoffs. But data suggest that the popular view that teachers were not needed was exaggerated. Shortages in particular subject fields, such as science and mathematics, never ceased and were well documented and discussed (Williams, 1981, 1983). Shortages in all age and subject fields existed in various geographic locations, and although some demographers described the market

shifts of the sixties and seventies in "boom to bust" terms (Sweet & Jacobsen, 1983, p. 206), such a view was generally misleading. The actual data suggest that it would be more accurate to characterize the changing national market for teachers as moving from uniformly excessive demand in the sixties to one of irregular and modest demand in the seventies.

Consider the fact that since 1970 the national demand for teachers dropped below 100,000 for one year only. Ranging from 99,000 to 189,000, the median number of open positions available for teachers was over 150,000 annually (Plisko, 1983, p. 182), hardly a "bust" situation. But state and regional differences in demand were large, and the social trends affecting them were studied and reported (Sweet & Jacobsen, 1983). Interest in changing market conditions actually grew across the decade, particularly when they combined with liberal certification requirements and collective bargaining pressures and contributed to an increased incidence of out-of-field teaching (Masland & Williams, July-August 1983). A North Carolina study, for example, found over 7,000 teachers teaching out of field, with over 1,100 persons not certified in science teaching science and almost 450 social studies teachers teaching math (Woolford, Presti, Gray, & Cable, 1982). The number of such studies and findings has increased, as have projections that such matters will worsen in the coming decade (Frankel & Gerald, 1982; Grant & Eiden, 1982). The public can be adequately forewarned by data collected in this demographic work, which suggests that the initial and continuing education of teachers will be increasingly needed in the years to come, particularly when the middle-age majority draws closer to retirement.

But the point of recounting the statistics gathered in these studies is not to suggest need. It is to emphasize the most salient characteristic of the student group itself: its massive size. The

potential such magnitude has for both the commonness and costs of teacher education must be noted. Preparing and offering sound programs of initial and continuing teacher education in a populated country committed to equal educational opportunities for all citizens is a vast undertaking. The U.S. commitment to mass schooling makes the teaching force so large and so common, in fact, that the U.S. must look to more or less average students, as well as to the highly talented, if it is to acquire enough teachers for its classrooms. Such awareness should help people, as Broudy (1980) suggests in another context, "understand why the goal of putting an inspirational teacher in every classroom is one of the great mischievous illusions of our time" (p. 448).

Salient measures of central tendency. The tremendous size and diversity of the prospective and practicing teacher group suggests that its measures of central tendency must be interpreted with caution. Nonetheless, Feistritzer (1983a) uses measures reported in recent demographic studies to characterize many of today's teachers:

> A profile of the "typical" American teacher suggests a woman approaching her 40th birthday. She has taught for 12 years, mostly in her present district. Over those dozen years, she returned to her local college or university often enough to acquire enough credits for a master's degree. She is married and the mother of two children. She is white and not politically active. Her formal political affiliation, if she has one, is with the Democratic Party. She teaches in a suburban elementary school staffed largely by women. In all likelihood the school principal is male. She has about 23 pupils in her class. When counting her after-hours responsibilities, she puts in a work week slightly longer than the typical laborer, and brings home a pay check that is slightly lower. (p. 1)

A number of these general qualities have some particular meanings for teacher education. The students of teaching, that is, those entering as well as those already engaged in professional practice, remain predominantly female. Women make up over two-thirds of the present teaching force and over three-quarters of the prospective teacher population (Grant & Eiden, 1982). The sexes are balanced in the secondary

school, but women outnumber men five to one in the elementary school. While the distribution of men and women in teaching has tended to remain constant in recent decades, the student pool now seeking initial certification has a growing proportion of women (NEA, 1982, p. 94). Thus to the extent that talented women acquire access to traditionally male occupations at the same time that occupations predominantly comprising women continue to be afforded less power, prestige, and pay than traditionally male occupations, the attraction and retention of highly talented persons into teacher education will grow more difficult.

Minority teachers are even more under-represented than male teachers, as over 90 percent of the present teaching population is white. Recent studies show a steady decline in minority representation among prospective and practicing teachers at the very time that a rapid and significant increase in minority pupils in the nation's schools is under way (NEA, 1982, p. 91). It is increasingly clear that the enriching perspectives brought to teacher education by minority students from various ethnic subcultures will be lost unless more successful recruitment programs are supported.

Reductions have also occurred in both the proportion and number of younger and older teachers, suggesting that the middle-age measure of central tendency is appropriately descriptive. Parenthetically, one wonders about the extent to which this factor might relate to the apparent mid-life crisis state of the occupational group itself. It suggests more straightforwardly, however, that most of today's inservice learners obtained their initial preparation for teaching when teacher education programs were excessively large and impersonal. Further, most of them have experienced a significant amount of post-baccalaureate education, as over half already have acquired master's degrees.

Related to teachers' formal education is the nonformal education they likely received in the home. The data suggest that the educational and occupational attainments of the parents of today's teachers is still modest, though gradually increasing. As recently as 1981, almost 20 percent of all teachers' mothers had completed only elementary school or less, and over 70 percent had never attended college. While 40 percent of all teachers' fathers were employed in occupations that likely required higher education (professional, semi-professional, managerial, and self-employed workers), the majority were from the ranks of skilled and unskilled laborers and clerical, sales, and farm workers (NEA, 1982). The lower middle-class background of persons entering and staying in teaching that became increasingly prominent in the 1950's (Zeigler, 1967) continues to characterize a significant portion of the contemporary population. Such data provide some clues to the kinds of learnings and intellectual norms that were likely emphasized in the teachers' formative years (Kohn, 1969).

Finally, there are two other statistics that should not be overlooked for their potential effect on teachers as learners. These include (1) the number and proportion of teachers reporting school-year employment beyond their regular, full-time teaching responsibilities and (2) the marriage and child-rearing rates, which also suggest added work responsibility (NEA, 1982). Excluding summer employment, over a third of all teachers report additional work for pay either within the school system (almost 25 percent) or outside the school system (over 11 percent). Whether such work involves bus driving, coaching, bartending, child rearing, or housecleaning, it obviously reduces the time and energy available for teachers' continuing education.

The Students of Teaching: Academic Qualifications

The general impression that many persons pursuing careers in teaching are academically weak continues to be supported by research. Unfortunately, many studies using population test scores give excessive attention to measures of central tendency and insufficient attention to the range. As an unintended consequence, the illusion is created that most persons preparing for teaching are average or below average in academic ability. Attention to the distribution of talent and important differences within the population of persons seeking careers in teaching is critical if misunderstandings are to be avoided.

Serious overgeneralizations already exist in the research literature, however, and require attention if the erroneous stereotype that smart people no longer enter teaching is to be clarified. Employing more journalistic style than scholarly constraint in reporting, a number of researchers have overlooked the potentially detrimental self-fulfilling prophecy effects of exaggerated claims. In "Teaching Competence and Teacher Education," for example, Kerr (1983) concludes the following:

> As far as test scores count as proxy measures for competence, it must be said that those who are entering teaching are relatively incompetent. That is, this society's brightest and best are not entering teaching . . . In short, the smart go elsewhere. (pp. 127-128) (emphasis added)

A journal article highlighting a summary statement of the Vance and Schlechty research (1982) provides another case in point; while data support the first half of their observation, they do not support the latter.

> Teaching appears to attract and retain a disproportionately high percentage of those with low measured academic ability, and fails to attract and retain those with high ability. (p. 22) (emphasis added)

After gathering and interpreting an otherwise well-considered number of data sets, Feistritzer (1983a) also fosters the erroneous impression:

> New opportunities for women in a wide range of professions within the United States are denying education the choice of the brightest and most creative women within the society. (p. 60) (emphasis in original)

The research in this regard is unquestionably clear. Teacher education does not fail to attract and retain persons with high ability. If there is a failure, it is that teaching does not get as many as might be hoped from the highest scoring test takers, but it does attract and retain many very bright people. Actually, the failure that is supported by data for both prospective and practicing teachers is that too many persons with excessively low scores on academic measures are allowed into teaching, but this claim needs further examination.

In order to reconcile the discrepancies encountered in various reports, two potentially confusing approaches to conceptualizing the teacher education talent pool must be distinguished. One approach first isolates the full teacher education population, counts the number from this group scoring in the upper quintile of all college graduates, and then reports the proportion that this number represents for the teacher education group as a whole. Since the overall teacher education population is very large and all fields compete for students in the upper quintile, a clear result of this approach is to come up with a relatively small proportion. Those painting a bleak picture of teacher education (e.g., Joyce & Clift, 1984) generally limit themselves to reporting data obtained from this approach.

An alternative approach used by those concerned with the talent flow in teaching starts with the academically talented population itself. Instead of beginning with all teacher education students and asking about the proportion of high scorers, they begin with all college students scoring in the upper quintile and ask about the proportion in teacher education. Like the questions that are raised, the characterizations that emerge from these two approaches differ.

When asking about the proportion of upper quintile talent going into teaching, Vance & Schlechty (1982) found that over 11 percent of the

highest scoring college graduates on the SAT verbal and math measures went into teacher education in 1976-79. In addition, approximately 7 percent of these highest-scoring graduates assumed teaching positions. It would be important to know how this record of recruitment compares with those of other occupations requiring a college education, because most jobs draw from the full distribution of talent in higher education. Nevertheless, all occupations recruit from the top, and getting over one tenth of all talented persons to enter teacher education during low demand years does not seem unreasonable; nor does getting 7 percent to enter teaching at this same time appear unduly low. The relevant question in need of further thought concerns what would constitute a reasonable percentage of the top quintile of college-educated persons that should pursue a career in teaching, assuming that society also wants bright and talented doctors, scientists, lawyers, and other professionals. Judgments about reasonable proportions should be made explicit before researchers and policy-makers comment on the apparent shortage of academically talented persons in teacher education.

While questions remain about research findings on the top academic talent in teacher education, the case is different for the other end of the distribution. The lowest scoring subset of the college population seems to contain excessive numbers of prospective teachers; 38 percent of the college graduates scoring lowest on the SAT verbal and math measures were recruited to education during the 1976-79 period, and approximately 28 percent of this lowest scoring subset obtained teaching positions (Vance & Schlechty, 1982). The fact that such a large number and excessive proportion of the lowest scoring college students are accepted into teacher education and subsequently recommended for certification explains the genesis of the stereotype that those in teacher education are the least academically able.

Weaver (1981) examined test data from the Educational Testing Service, the College Board, the American College Testing Program, and the National Longitudinal Study. Interested in potential changes in the mean scores of college-bound high school seniors showing a preference for teaching, he found an overall pattern of mean test-score decline in verbal and qualitative skills. The relative rank of college-bound seniors interested in teaching compared to those interested in other occupations showed little change across the decade.

Although a shifting and sorting-out process occurs after the high school preference for teaching is indicated, Weaver (1979) found the mean test scores for college seniors majoring in all education fields combined to be at roughly the 40th percentile. His data permitted the conclusion that the majority of new teacher graduates fell into the lower half of their college class on skills measured by the SAT, ACT, and NLS test battery. Although such results hardly suggest an overwhelming below-average majority, it is a majority nevertheless, and the number and proportion at the bottom appears excessive for persons pursuing a career that is basically academic in nature. With little attention to the distribution of test scores, Weaver did note that his data showed "no larger proportion of non-white students in education than in other career fields, and the presence of minorities among graduating education seniors had virtually no effect on SAT scores" (p. 11).

Schlechty and Vance's longitudinal study (1981) of North Carolina teachers supported Weaver's conclusions. They found that as a group those entering teaching scored less well on the National Teacher Exam (NTE) than prospective teachers had in the recent past. They also found those most likely to leave teaching early and in the greatest numbers were among those obtaining the highest scores on the NTE, while those most likely to stay in

teaching the longest were from the ranks of those obtaining the lowest scores on the NTE. Although one could question the use of the NTE alone, Pratt's (1979) research indicates that scores on the SAT verbal and math subtests are acceptable predictors of the NTE common examination scores.

Further work by Vance and Schlechty (1982) supported the external validity of Weaver's study as well as their own earlier findings. They used the National Longitudinal Study of 1972 High School Seniors to obtain their population. Drawing from those reporting an earned baccalaureate degree by 1979, they compared the SAT scores of those who majored in education, held teaching positions, or obtained teaching certificates with those who had not pursued teaching at all. Having ranked the total population into five quintiles on the basis of SAT scores, their data showed that those attracted to teaching had a proportionately larger share of the lower ranks and an appreciably smaller share of the upper ranks. In other words, the patterns from the national sample closely paralleled the patterns found among North Carolina teachers. These patterns are so regular that they ought not be ignored.

Almost one-quarter of the college graduates were recruited to education in 1979, and Vance and Schlechty's (1982) data show that the lowest ranking set of the total graduate pool contributed the greatest proportion of its members to teaching (approximately 38 percent). The second lowest rank contributed approximately 26 percent of its members to teaching, the middle rank approximately 23 percent, the second highest rank approximately 17 percent, and the highest rank about 11 percent.

Looking beyond high school graduates interested in teaching and college graduates recruited into education, Vance and Schlechty examined the population of college graduates who became teachers. Although 25 percent of all college graduates went into teacher education, only about 18 percent

actually assumed teaching positions. But here again, the pattern of many lows and progressively fewer highs was consistent. Of the total college graduate population, the lowest-ranking set had approximately 28 percent of its members assume teaching positions, the second-lowest rank had approximately 21 percent, the middle rank had approximately 18 percent, the second-highest rank had approximately 13 percent, and the highest rank had approximately 7 percent. Even among those who actually taught but thought that they would subsequently leave teaching, Vance and Schlechty found the highest percentage of potential loss among the highest ranking set (approximately 85 percent) and the lowest percentage of potential loss among the lowest ranking set (approximately 62 percent).

The research of the past decade shows that many students from the ranks of the least academically inclined, at least as judged by standardized test performance, were allowed to enter and successfully exit from professional training programs for teachers. An important perspective that must be emphasized, however, is that the phenomenon is not new or even recent in origin. The problem of too many lows in teaching, although often cast as a problem of not enough highs, has been known and a topic of expressed frustration and discussion at major educational meetings since the 1800's (Powell, 1980; Mattingly, 1975). In the mid 1900's the Carnegie Foundation For the Advancement of Teaching studied The Student And His Knowledge and reported the 1928-32 high school test results for those going on to college (Learned & Wood, 1938). Their interesting introduction and conclusions highlight the enduring quality and, incidentally, the consistently sex-related nature of the research.

> The last feature of the test results that has been chosen for inclusion in this summary has to do with a group of college students who from time immemorial have been the beneficiaries of special care and attention on the part of colleges and universities. These are the students who are being prepared to teach. The results concern . . . students tested in 1928 and in 1932. In both tests the teacher's average was below the average total score for the entire group and was below

> all other group averages except those of business, art, agriculture, and secretarial candidates. In the second test, the artists scored above the teachers.
>
> The only consolation to be drawn from these findings appears in the fact that among the prospective teachers graduating from arts colleges and technical schools the male contingent taken ranks high. In both examinations, the men scored higher than any other large occupational group except in the second test, the engineers. Unfortunately, this group of male teachers is the group with which the pupil himself comes least in contact. Their work in connection with a school is likely to assume an administrative character. The group also includes those who will teach in college and there engage partly or wholly in research. (pp. 38,39)

Too many lows. Here the research seems unequivocal. Those who teach teachers encounter a substantial number of learners with average and high scores on standardized measures of academic ability. But the overall group norm for teacher education students falls below the average for all college students due to the larger numbers of learners scoring in the lowest ranks on such measures. The over abundance of teacher education students drawn from among the least academically inclined certainly contributes to the characterization that all prospective and practicing teachers have low intellectual ability. But the unfortunate stereotypes are not the only potentially negative consequences. An additional possibility is the discouraging effect that sustained interaction and association with large numbers of relatively slow concrete learners can have for more intellectually facile abstract learners and their teachers.

The curriculum and instruction for courses and workshops necessarily revolve around the intellectual norms of the student group. Conant (1963) argued for selection of above average students on the grounds that "general education must not be pitched at too low a level or too slow a pace" (p. 81). Further study is needed in teacher education, assuming the student group is dominated by persons from the lowest quintiles of

academic talent, on the extent to which course objectives and instructional discourse revolve around the majority's desire, if not demand, to be told rather precisely and concretely what to do and how to do it. Such concrete direction reduces cognitive strain and allows the student majority to escape from that which they are less able to enjoy or do well--think, reason, question, and analyze. It is possible that some of the long-criticized mindlessness of teacher education begins here.

In addition, a majority of adult learners tend to have a more powerful influence on their teachers and student colleagues than a majority of child learners. Not only can adult learners express dissatisfaction more directly with less fear of reprisal, they can more readily cause problems for the professor/teacher or staff developer/teacher by complaining to authorities (e.g., department chairs, school administrators, or union officials) or hand in devastating course evaluations when the content seems inappropriate (e.g., too theoretical or too abstract). Negative consequences for the teachers of adults are even more apt to follow when the unhappy majority expresses their dissatisfaction as a group.

Such power and influence on the part of adult student groups is constructive when the group's academic norm is not controlled by a majority of the least able. But when that norm is dominated by lower ability students over sustained periods of time, the highly motivated and intellectually quick adult learners and teachers may well seek alternative student groups for teaching and learning. Just as adult learners have more power and influence over teachers than children do, they also have more freedom. Not captured by parental or legal authority, they can leave the classroom with relative ease when the teaching-learning situation becomes excessively uncomfortable. In addition, it is likely that

talented students will help small numbers of fellow students struggle intellectually with complex knowledge and skills, but they are less likely to tolerate prolonged discussion of simplistic and surface knowledge and skill. Neither are talented adult learners apt to attempt serious conversion of the less able majority of their preservice classmates or inservice counterparts. The task is too difficult, and talented adult learners, as well as talented adult teachers of teachers, have alternatives. Opportunities for avoiding the discomfort of academic boredom and partaking of the enjoyments of intellectual challenge can be found elsewhere.

Thus if there is evidence for the hypothesis that academically talented teachers of teachers and academically talented students of teaching will tend to avoid student groups that are dominated by the least scholarly and academic, it is important that initial teacher preparation reduce the dominant proportion of lows that research shows are clustered in the student population of particular institutions (Schlecty & Vance, 1983b). Similarly, especially challenging academic opportunities in continuing education must be provided for the minority group of average and above average practicing teachers, lest they too continue the exodus from the low basic-skill levels of inservice training that now endure because of their apparent appropriateness for a less academically inclined majority.

It is also possible, given the tyranny of needs assessment approaches, that many average and above average teachers get overlooked in continuing education decision making, since the nature of today's inservice is often determined by these majority-driven instruments. Describing the characteristics of "The Elementary School Teacher as Learner," Bierly and Berliner (1982) also seem to join the trend of generalizing needs from the

apparent preferences of the below-average majority. Basing their observations on staff development evaluation reports and experience, they identify priorities that include "the need for practicality and concreteness in instruction" (p.37), the "need for individualization and adaptation of instruction to teachers' own classroom situations" (p.38), the "need for coaching in the classroom by observers who provide feedback," and the "need for having instructors who were or are teachers themselves" (p. 39). The press for having external experts tell or show "the concrete right way to teach" prevails. In a similar vein, but drawing from NEA surveys, McCune (1977) reports that

> the major priorities that teachers pose for the education R and D community revolve around questions such as: What are the best methods of instruction? How can I best individualize the instruction within the classroom? How can I improve my teaching effectiveness? (p.9)

The excessively concrete and tell-me/show-me nature of such classroom bounded concerns is made salient by the general absence of requests for more profound and thoughtful interactions and issues. Doyle and Ponder (1977-78) also identify and discuss what they identify as the practicality ethic in teacher decision making.

While the full explanation for intellectual preferences and the press toward low-level knowledge in teacher education cannot and should not be attributed to the prospective and practicing student majority that falls significantly below the measured average of academic talent for all college educated persons, the influence of this large below average group must not be overlooked. These influences include the group's tendency to depress the levels of content knowledge assumed appropriate for the teacher education curriculum and to discourage talented teachers and students from being seriously committed to the improvement of teaching and teacher education.

While the need for teachers and the competition for the most talented students will continue to be strong, teacher education must look to the full distribution of college talent for its large learner population. But research and policy can shape recruitment, retention, and certification decisions so that the overall norm for the teaching force comes from the average and above, rather than from the average and below, as has historically been the case. Demographic study suggests that recent supply and demand trends would make policies to this effect possible. After the excessive demand years of the sixties, the surplus of qualified teachers available in the seventies would have permitted the screening out of the least academically inclined of the college student population. An adequate supply of qualified teacher candidates would have been available each year across the past decade, even if all of those in the lowest quintile had been denied access to teacher education. It also appears that a screening policy of this or a comparable nature would be possible between now and 1990. During this time period, college graduates entering the labor force are expected to exceed jobs traditionally filled by such graduates by over 3 million (Bureau of Labor Statistics, 1980).

But student's academic ability is not everything, however, and the equally important factors of study motivation, aspiration, and expectation must also be considered. As Evans, a wise teacher education researcher from England, observed, "the ability to teach is not the same as actually bothering to do so" (cited in Crocker, 1974); to enrich this admonition still further, the realization that "the ability to teach is not the same as having the opportunity to do so" must also be added.

The Students of Teaching: Expectations and Motivations

Teacher educators encounter many learners that are not easily engaged in serious intellectual growth with the aim of improving schools and professional practice. Not only are the academic interests and abilities of the student majority low when compared with the college educated population as a whole, but the learners' affective propensities are equally problematic. The research evidence suggests that both prospective and practicing teachers maintain low expectations for the professional knowledge aspects of their education. The desire for serious and continued learning for improvement purposes are also understandably low in light of growing declines in extrinsic and intrinsic rewards for the occupation of teaching itself. Further, aspirations to employ new understandings and intellectual insights while remaining in teaching are often perceived as disfunctional, because opportunities to exercise informed judgment, engage in thoughtful discourse, and participate in reflective decision making are practically non-existant as teaching is presently defined. A skeptical student attitude often prevails, therefore, in response to the very logical question, "Why bother to be a serious student of teaching if the learnings will probably not be worthwhile?"

Student's expectations for teacher education. Prospective teachers' expectations for professional training are acquired indirectly from early encounters with their own elementary and secondary teachers, social norms communicated by the general public, and the existing ethos on the higher education campus. The expectations formed from these sources typically carry a negative valence and reflect an awareness that teacher education is easy to enter, intellectually weak, and possibly unnecessary.

Prospective teachers enter preservice coursework having already spent much of their lives in classrooms (Lanier & Henderson, 1973), serving what is considered an "apprenticeship of observation" (Lortie, 1975). In addition, experiences such as camp counseling, teaching Sunday school, and serving as teacher aides contribute to a conception of teaching that seems to emphasize nurturant instincts over intellectual capacity.

Book, Byers, and Freeman (1983) found that many candidates come to formal teacher preparation believing that they have little to learn. Over forty percent expect to leave in less than ten years, with almost half of this set expecting to raise a family; the others intend to change careers entirely or advance in education. In the eyes of most of the 400 students they studied, the major obligation of teacher educators was to create classroom teaching opportunities for candidates prior to their accepting paid teaching assignments. Adding to this apprentice view of teacher education was a conception on the part of many that teaching is largely "an extended form of parenting, about which there is little to learn other than through instincts and one's own experiences" (Book, Byers, & Freeman, p.10). The summary data showed almost one quarter of the students entering teacher education with high or complete confidence in their ability to teach prior to specialized coursework. Another two-thirds were at least moderately sure of their ability at the outset, leaving almost 90 percent of the student group believing that professional studies had little new to offer them. Book, Byers, and Freeman (1983) suggest that such entering views reflect the strength of the lore that there is little "need to obtain a knowledge base in pedagogy in order to become effective teachers (p.11)."

The views that prospective and practicing teachers hold about learning to teach affect their involvement in formal programs of teacher

education and their work with one another. Asked about preparation for teaching, experienced teachers insist upon the primacy of the classroom environment, arguing that teaching is inevitably learned through experience (Lortie, 1975). The expressed views of teachers that teaching is mastered on the job are more consistent and less diverse than the interpretations offered by researchers. In the research literature, one encounters a considerable degree of uncertainty about the various sources of such attitudes. The influences of prior socialization (Lortie, 1975), general university experience (Zeichner & Tabachnick, 1981), initial pedogogical preparation (Cruickshank & Broadbent, 1968; Lacey, 1977), bureaucratic and professional norms of individual schools (Hoy & Rees, 1977; Zeichner & Tabachnick, 1981, 1984), the power of significant other persons or groups (Edgar & Brod, 1970), and the peculiar ecology of the classroom (Doyle, 1977; Fuller & Bown, 1975) have all come under scrutiny.

What practicing teachers expect from teacher education is connected, understandably, to the value they assign to their own formal preparation. Unfortunately, the research on the perceived value of teacher education concentrates more on portraying teachers' general satisfaction or dissatisfaction than on probing for the sources of either. Nevertheless, the record of disappointment predominates; one recent review of the literature on teacher education and induction summarizes the descriptive literature as a "litany of woe" (Bureau of Educational Research, 1983). But while the record of teachers' disappointments is clear, insightful interpretations of the disjuncture between expectations and work and between training and on-the-job demands are less available.

One problem is that most conclusions are based on teachers' global assessments of their initial preparation and its general capacity to support them in the full range of their current responsibilities. Thus, the available literature offers little basis on which to sort out the contributions that teachers' formal preparation has made to their distinct professional capabilities. Unique areas of preparation remain undistinguished, such as depth, rigor, and currency in subject area knowledge; sophistication in curricular and instructional judgments; broad intellectual preparation as a well-educated person; and high quality solutions to recurring problems of student learning or classroom organization. On the whole, efforts to acknowledge the achievements of beginning teacher education or to uncover its failings have been uninformed by any clear understanding of its aspirations for teachers and teaching (Katz, 1980).

A second difficulty in judging teachers' views of their formal preparation is that the research has been largely retrospective, eliciting teachers' judgments at a time when the press of day-to-day responsibilities may submerge the intellectual dimension of their work and set a premium on technical details. A longitudinal and biographical examination of the evolving views of prospective and practicing teachers of the sort begun by Zeichner (1983) in following student teachers into their first year of teaching may help to place such judgments in context and to determine which of several competing estimates and interpretatins of program effect provides greatest explanatory power (Nemser, 1983; Veenman, 1984).

Plagued by these difficulties, the available survey and case study research produces a predictably contradictory picture. In such studies, teachers give mixed reviews to the programs of beginning and continuing

education in which they have participated. They are ambivalent about the capacity of such programs to build substantive competence or to serve as a route to personal self-confidence, professional prestige, and other rewards. But in the main, teachers make critical judgments. Although isolated programs receive acclaim from their graduates, the prevailing view is that the ideas and methods emphasized in beginning teacher preparation do not accord well with the challenges subsequently met in the classroom (Eddy, 1969; Fuchs, 1969; Griffin & Hukill, 1983; Little, 1981; Lortie, 1975; Ryan, 1970). In an essay probing the personal reality of learning to teach, Greene (1979) argues that such criticisms are both inevitable and, in some respects, unwarranted:

> No matter how practical, how grounded our education courses were, they suddenly appear to be totally irrelevant in the concrete situation where we find ourselves. This is because general principles never fully apply to new and special situations, especially if those principles are thought of as prescriptions or rules. Dewey spoke of principles as modes of methods of analyzing situations, tools to be used in "judging suggested courses of action." ...We forget that, for a rule to be universally applicable, all situations must be fundamentally alike; and, as most of us know, classroom situations are always new and never twice alike. Even so, we yearn oftentimes for what might be called a "technology of teaching," for standard operating procedures that can be relied upon to "work." Devoid of these, we project our frustration back upon whatever teacher education we experience. (pp. 27-28)

Programs of continuing education come under similar attack. In a study of fifty elementary and secondary school teachers, Spencer-Hall (1982) received negative critiques on formal programs of inservice from fully half the teachers and mixed responses from almost another third. Among teachers' complaints were that programs were poorly planned, irrelevant to the demands of their work, unconnected to each other or to teachers' work over time, badly aligned with other scheduled commitments, and implicitly or explicitly oriented toward correcting

individual deficiencies. Programs were typically designed by administrators with little meaningful influence by teachers. Spencer-Hall's findings are consistent with those of other researchers (Little, 1981; Moore & Hyde, 1981). But like many of the accounts of beginning teacher preparation, the primarily disparaging views of professional development reveal only prevailing patterns, while masking the features that relate to teacher expectations and distinctions between effective and ineffective components or designs (see Vacca, Barnett, & Vacca, 1982).

Just as much of the research on elementary and secondary teaching has moved away from an emphasis on the negative toward studies of exemplary models, so is there a shift away from documenting and belaboring views of the legendary bad models that characterize the dominant modes of teacher education. A more productive approach is the study of meanings and views prospective and practicing teachers bring to and take from the most exemplary and effective teacher education practices, even if such settings represent a minority at this time. Nonetheless, present studies show that the experience of and the expectations held by contemporary participants in teacher education are, in general, predominantly negative. The ethos of low esteem for university-based and school-based teacher education is bound to influence teacher-student interactions in preservice and inservice settings.

It should also be noted that prospective and practicing teacher expectations for their professional education stand in contrast to those of persons in other professions who anticipate difficult access, hard work, a sense of academic value and occupational continuation. Instead, prospective and practicing teachers expect simple access, easy work, minimal academic value and occupational discontinuation. Students in other professions enter with the belief that they have

much to learn. Such acknowledged unknowns become motivations to learn, and the inevitable endemic uncertainties of practice rest side by side with a respected body of collectively accepted views and practices (Fox, 1957).

Early research on the social and psychological environments of medical schools as they shape "the professional self of the student, so that he comes to think, feel, and act like a doctor" were reported by Merton, Reader, & Kendall (1957) in The Student-Physician. At the outset of that work, they assumed the obvious importance of the studies because "it is plainly in the professional school that the outlook and values, as well as the skills and knowledge of practitioners are first shaped by the profession" (p. VII). No such entering assumption is possible for those studying the professional self of students coming to think, feel, and act like teachers. Learning to teach is complicated in many deceptively obvious ways (Feiman-Nemser & Buchmann, 1983), not the least of which are the students' expectations that they already have sufficient understanding and there is little more of value to be learned.

Students' motivations for serious study of teacher education. In addition to the occasional pleasures of professional study itself, the primary rewards of initial or continuing professional education are found either in the occupation for which the study provides access or in the improved work performance that accrues as a consequence of the study. The case is no different for teacher education. Many valuable insights obtained in this regard are found in Lortie's (1975) survey work and sociological analyses reported in Schoolteacher. Although his specific findings are now somewhat dated, and many of his interpretations are tarnished with traditional views of women in

society, the classic nature of his contributions must be taken seriously.

Lortie's data and thoughtful analyses portray a number of attractions in the work of teachers: enjoyment in working with young people; pride in performing important public service; ease of entry, exit, and re-entry; time compatibility; some modest material benefits; and psychic rewards emanating from student achievement. Importantly, Sykes (1983a, 1983b, 1984) has since updated this work by drawing on changes occuring over the past decade that appear to "undercut the classic attractions of teaching" (p. 108). He thoughtfully and often poignantly characterizes the diminishing returns: decreased enjoyment from work with less responsive and appreciative young people, a deteriorating public image of teaching as important service, a major reduction in lateral school mobility for women and upward school mobility for men, the erosion of material benefits, reduced psychic rewards from less regular student achievement, and teaching environments that all too often are disruptive, dangerous, and bureaucratic to the point of frustration.

Prospective teachers can hardly maintain the naive optimism they once held, especially in light of well publicized declines in the job market and a spate of reports on the problems of contemporary teaching. Instead of admiration for those going into such an important field, today's citizenry wonders why those with good sense pursue it. Boyer (1983) describes the reported difficulties of students planning to enter teaching: "We are under tremendous pressure all around to constantly justify our choice of a career. Professors want to know why we are taking this course, and most of the other students think we are crazy" (p. 173).

Practicing teachers already know that rewards are few and on the decline, as are opportunities for advancement into educational administration or colleges of education. The flat career structure of teaching, combined with a great many teachers at the top of their salary schedule and in possession of a master's degree, leaves incentives for continuing education lacking in students' minds. But factors to be considered for contemporary students of continuing teacher education go beyond research on what they find missing in their work. What prolonged teaching does to their frame of mind must not be overlooked.

The Effects of Prolonged Service in Teaching

The present generation of America's teaching force, for the first time, has come to be composed of a majority of career teachers; and the research suggests that career teachers have historically been dissatisfied with and alienated from their work. Lortie (1975) described male teachers as "transient members of the occupation, literally and psychologically" (p.54). Yet, Zeigler (1967) found that "in actual practice, more males than females remain career teachers" (p.16), and disgruntled ones at that; his research "produced clear and unequivocal evidence indicating there is substantial job dissatisfaction among male teachers" (p. 19). But most of the one-third of the teaching force composed of men historically sought upwardly mobile work in education or alternative employment, and until recently, were generally able to be successful in this regard. But now they remain, unhappily confined to what many of them perceive as a dead-end occupation.

The situation is little different for career women teachers, except that this group now includes both married and single women. Historically, the single women remaining in teaching and dedicating themselves to their work in the public's most idealized sense also became dissatisfied with the occupation (Lortie, 1975; Zeigler, 1967). Positive attitudes for both men and women deteriorate with longevity in classroom teaching and become, as Zeigler (1967) observed, "in flux if they are not firmly hostile and negative" (p.50); Lortie (1975) agrees, noting that "persisters are relatively disadvantaged" (p. 99). Reduced up-and-out opportunities for men's traditional escape and less in-and-out job flexibility for married women seems to have provoked growing resentment.

As a group, the students of continuing teacher education are weary from the excessive demands of the occupation, dulled from their routinized work with children, and frustrated by the lack of opportunity for intellectual, purposeful exchange with adults. In response, a great many of them simply disengage from the business of teaching. Much of their teaching becomes routinized, habitual, and unenthusiastic (Sykes, 1983a). They go through the motions and they acquire second jobs or other side interests that give them something other than kids and school to think about (Cusick, 1981). While they cannot escape teaching in body, they can in mind and spirit, and these career teachers are today's majority: They are the students that teacher educators must motivate to learn to teach more effectively. The task represents an obviously formidable challenge, particularly when it must be accomplished on top of the average teacher's 46-hour work week (Sykes, 1983a).

A point of emphasis that must not be slighted, however, concerns the enduring nature of the problem here discussed. The cognitive and affective costs associated with prolonged work in teaching are not new, and two recent historical studies illustrate this reality. Dyer was able to rescue from obscurity materials that portray the struggles of an aspiring middle-class woman teacher of the mid-nineteenth century. In To Raise Myself a Little: The Diaries and Letters of Jennie, a Georgia Teacher 1851-1886 (Lines, 1982), Dyer chronicles the odyssey of Amelia "Jennie" Ahehurst, who moved from New York to Georgia in search of better opportunities for herself through teaching. Unsuccessful in her efforts to raise herself, she never found work that offered sufficient remuneration along with satisfactory living and working conditions. The diaries and letters that chronicle her moves portray a teacher's life in a variety of settings and point out that teaching has long held many disadvantages that even committed women found hard to endure. The dissatisfactions Jennie encountered in her career included low pay, inattentive and undisciplined students, outside interference in her classroom, and numerous other ills; like today's contemporary teachers, when her daughter followed in her footsteps, Jennie complained about the difficulties she knew awaited her.

Powell (1976), in his historical study, cites the articulate analysis of a high school teacher wrestling with the problem of attracting and keeping talented persons in teaching. As early as 1890, H. M. Willard, a Massachusetts teacher, attributed "the difficulty of recruiting the ablest and most ambitious college graduates to teaching--graduates with career options in law, medicine, business, or science--to the current nature of the career itself" (cited in Powell, 1976, p. 4). In striking terms, Powell draws from Willard's argument.

> in contrast with other professions in which successful individuals occupied 'positions of honor, responsibility, and authority,' teachers lived lives of 'mechanical routine' and were subjected to a 'machine of supervision, organization, classification, grading, percentages, uniformity, promotions, tests, examinations, and recordkeeping.' Nowhere in the school culture was there room for 'individuality, ideas, independence, originality, study, investigation.' Working alone and limited to their classrooms and studies, they tended to become recluses rather than 'en rapport with the live issues of the day.'
>
> Confined to the company of the young and powerless, teachers easily became autocratic, opinionated, and dogmatic. Their isolation extended to relationships with other teachers as well. Instead of colleagueship and cooperation, he found a 'critical or jealous spirit.' (p. 4)

Powell and Dyer's work indicates that the "teaching is not what it used to be" perception on the part of many if only partially correct. In many important ways, career teaching is much like it has always been in this country. The historical and sociological research suggests that career teachers have long been rewarded inadequately and have consistently "burned out." Perhaps the major changes in the problem are ones of greater degree, increased magnitude, and general awareness of the phenomena. Continuing teacher education can help to alleviate, but will not solve, the oppressive problems of career which must be addressed through changes in teachers' workplace, workload, and initial preparation.

Summary: Research and Better Understanding of the Learners

Those who study, set policy for, or are themselves engaged in teacher education can be increasingly informed by the growing body of research on the students of teaching. The expectations, aspirations, academic abilities, and motivation for learning that prospective and practicing teachers bring to teacher education are as influential and important as these same learner qualities in all teaching situations.

The two learner groups, preservice and inservice teachers, have both changed in important ways over the past decade. The overall size of the preservice teacher group became substantially smaller and composed of fewer academically talented and more academically weak students than heretofore. This change is of no small concern because many students of teaching, as a group, have traditionally scored in the lowest quartile of measured college student ability. Also during this past decade, the inservice teacher group became more stable than at any time in America's past, giving this country its first generation with a majority of career teachers. The attrition that occurred at the inservice level also showed a disproportionate loss of the more academically talented teachers and a disproportionate retention of the less academically able, just as with the preservice group.

Much of the recent research documents these changes and examines the potential influences on and effects of these changes for teacher education. The other studies emanate from a variety of disciplinary perspectives and enrich the understanding of teachers as learners, although they cumulate to emphasize a clear set of challenges to teacher education.

While those who teach teachers encounter learners with a wide range of academic ability, the research cited here suggests that recruitment and retention of the more academically talented learners will become increasingly difficult. Further, although there are differences across institutions, the group norms for prospective and practicing teachers are moving toward the low-average end of the scale. Those who teach teachers also encounter learners whose motivation for learning is negatively influenced by a set of career expectations and aspirations that emanate from predominantly low professional and public regard for serious

investment in teaching and teacher education. A work environment that is generally lacking in intellectual stimulation and group norms that traditionally and increasingly reflect below-average ability and interest in academic pursuits understandably influence the motivation to learn on the part of students of teaching. These problems will not only persist, but will become exacerbated if changes in the conditions of teaching are not made.

Studying the Curriculum for Teaching

Gradually acquiring more breadth and depth, the curriculum research in teacher education is more enlightening than heretofore, although many basic questions remain. In all fields the study of curriculum can be confusing because of its multiple definitions and meanings, but when several of these differences are contrasted, they illuminate the major issues and controversies surrounding curriculum research in teacher education.

One common view of curriculum study attempts to ascertain whether a selected content produces one or more effects considered desirable by academic specialists or researchers. Such studies often raise questions of input-output efficiencies and are referred to here as "expert-designed content and process studies." These studies dominate teacher education curriculum research, but their cumulated contribution to better understanding of content issues in teacher education is difficult to summarize.

An alternative to the expert-designed content and process studies is curriculum research that emanates from a broader view of curriculum itself. Curriculum studies that view curriculum as "what students have an opportunity to learn" (McCutcheon, 1982) provide more intellectual insight and challenge to the field, although less research of this order is available. Such studies raise questions about the knowledge and understandings that are either made accessible or withheld from prospective and practicing teachers. Acknowledging the moral as well as the scientific

dimensions of teaching, these studies describe and analyze the problems and paradoxes of knowledge, the potentially constructive or harmful effects of learning experiences for learners (i.e., for teachers or prospective teachers in this case), and the social and cultural interests that may influence knowledge in teacher education. Because descriptive-analytic curriculum work is generally more informative for relatively young and developing fields of study like teacher education, these approaches are emphasized in this review.

What Students Have An Opportunity to Learn: Description and Analysis

Available in almost three-quarters of all four-year colleges and universities in the nation (Plisko, 1983, Tables 4.2 and 4.9), the broad outlines of initial teacher education convey the appearance of standardization. As an all-university responsibility, the course work for prospective teachers is organized into three familiar strands: general education, subject matter concentrations, and pedagogical study. Ordinarily, these strands include general liberal arts courses comparable to those taken by all undergraduates, courses reflecting the core knowledge in selected substantive areas, and courses meant to provide an acquaintance with the purpose and origins of schooling in America and a grasp of fundamental pedagogical principles and practices. Given such learning opportunities, initial programs are expected to prepare candidates who can assume independent classroom teaching responsibility for young students without causing undue harm. The undue harm concept implies that beginning teachers are able to do more than provide responsible oversight for the physical and emotional well-being of the children in their charge. The neophyte must also be able to provide equitable and appropriate learning opportunities for students and effectively help them acquire the

content and skills common to their grade and level. But beyond these general expectations and three content categories in initial preparation, there is limited common substance to the teacher education curriculum. The course content that prospective and practicing teachers have an opportunity to learn is highly unstable and individualistic. The variation among and within courses and workshops at different institutions, as well as in the same institution over brief periods of time, achieves almost infinite variety.

Consistent chaos in the course work. Much is said about professors of education not having agreed upon a common body of knowledge that all school teachers should possess before taking their first full-time job. But the situation is equally characteristic of other faculty groups sharing all-university responsibility for teacher education. Of the three content areas in teacher education, in fact, the two most neglected in curriculum research are the general studies and subject matter concentrations. Little is known about what prospective teachers typically encounter or learn from academic study in these areas. Conant's study (1963) of two decades ago stands alone as seminal work and is worthy of increased attention and follow-up.

Consider, for example, the extended-program argument that continues to rage. The only difference Conant found between four- and five-year programs was the number of courses available for student electives; he concluded,

> To return to the California pattern, it is only fair to repeat that the issue between four-year and five-year continuous programs turns on the value one attaches to free electives. And if a parent feels that an extra year to enable the future teacher to wander about and sample academic courses is worth the cost, I should not be the person to condemn this use of money. But I would, as a taxpayer, vigorously protest the use of tax money for a fifth year of what I consider dubious value. (pp. 203-204, emphasis in original)

With a sample stratified for comparisons between prestige colleges and teachers colleges, Conant found the course requirements both in subject area concentrations and in general studies in a state of disarray. After examining the depth and breadth of the subject matter concentration requirements, he reported:

> Thousands of students each year wander through survey courses with only the shallowest knowledge of the subject. . . . It is risky to assume that a holder of a bachelor's degree from an American college has necessarily pursued a recognized subject in depth, or in a coherent pattern. (p. 106)

In his examination of the general studies, he found similar trends. A confusing disparity of offerings and requirements was present among all types of institutions in English, mathematics, social science, and the humanities. Even philosophy, which Conant considered "an essential element in any collegiate program pretending to breadth or coherence" (p. 89) was rare as a specific requirement. Conant argued for fewer electives and more requirements as a means of obtaining greater depth. Citing the practical reasons, he emphasized teachers' need for knowledge beyond their area of specialization. And Conant's arguments were not confined to classroom utility, for he strongly believed that substantive conversation with students, parents, and colleagues was also critical:

> If a [teacher] is largely ignorant or uninformed he can do much harm. Moreover, if the teachers in a school system are to be a group of learned persons cooperating together, they should have as much intellectual experience in common as possible, and any teacher who has not studied in a variety of fields in college will always feel far out of his depth when talking with a colleague in a field other than his own. . . . And if teachers are to be considered learned persons in their communities, and if they are to command the respect of the professional men and women they meet, they must be prepared to discuss difficult topics. For example, to participate in any but the most superficial conversations about the impact of science on our culture, one must have at some time wrestled with the problems of the theory of knowledge. (p. 93)

Conant recommended that intensive single-subject certification as well as depth in other subjects be acquired through carefully articulated

undergraduate courses. To fit this sort of depth and rigor into a four-year teacher education program, Conant recommended the integration of professional and liberal studies and the elimination of overly simplified, technical courses. But his logical and reasonable call for education as liberal study had been made many times before.

When higher education first assumed responsibility for teacher education, it was done in the belief that education was worthy of in-depth, scholarly study in the best university tradition. Borrowman (1965a) has documented the history of the issues and discourse that surround the general/liberal and professional studies relationship. Tracing many of America's early admonitions and recurring disappointments with education's failure to sustain the traditional values of liberal education for teachers, Borrowman emphasized the inquiring mind and spirit: A "commitment to the pursuit of knowledge for its own sake and not an undue concern for immediate results" was necessary, in addition to "problem-raising as well as problem-solving activity" (p. 11).

Bestor (cited in Borrowman, 1965a) observed that the study of education started out right, but deteriorated when the curriculum "did not offer to deepen a student's understanding of the great areas of human knowledge, nor start him off on a disciplined quest for new solutions to fundamental intellectual problems" (p. 15). Bestor, like many scholarly critics before and since, objected to preparation that offered specific practical solutions to specific practical problems instead of the knowledge teachers could use to solve problems on their own. The incessant tension and disagreement over content in teacher education continues to revolve around this basic curricular issue. Borrowman emphasized this point and urged that the crux of the argument not become confused; it is not professional education versus liberal education, but liberal-professional education versus technical-professional education.

While the research of the past decade brings perspective to this ongoing controversy, Borrowman's historical analysis continues to inform the contemporary debate over extended programs and should be reconsidered. He reported three sets of prevailing attitudes regarding the relationship between liberal and professional studies.

The first set, "that of the purists, who favor a four-year liberal education followed by a fifth year of highly professional training, has been idealized by some for a hundred years" (Borrowman, 1965a, p. 45). This purist attitude requires singleness of purpose within an institutional unit. It encourages the liberal arts faculty to ignore professional concerns, and on the professional school side it implies "that all instruction should be vigorously tested for its contribution to competence in classroom teaching" (p. 26). The professional studies, in the purist sense, are to be separated in time, that is, they are to be acquired after the general/liberal studies.

The second set of attitudes Borrowman describes is the integrated set, so called because it assumes "the distinction between liberal and professional studies to be a false one" (p. 26). Given this view, studies are selected for their concomitantly liberal and professional ends and are organized around a set of professional functions of teaching or a general social problems core.

The third set of attitudes, described as "the eclectic or ad hoc approach" (p. 39) grants a distinction between liberal and professional education but assumes that both should occur early in the student's collegiate career and continue to run parallel throughout undergraduate and graduate programs. Borrowman's analysis refers to various initiatives and experimental programs undertaken to examine these separate and integrating positions, although little has been learned from them for some of the following reasons:

> One is that no institution has been able to attempt either plan under conditions that its advocates would consider sufficiently ideal for the experiment to be accepted as a definitive test of their basic assumptions. A second reason is that the educational process is simply too involved, too little susceptible to the kind of control that scientific experimentation demands, and aimed at too many different outcomes to permit its being evaluated in terms of any single theoretical principle. (p. 40)

Consensus in favor of either extreme position has not emerged, therefore, and Borrowman notes a "widespread tendency to avoid pressing for agreement on an overarching principle" (p. 41). The purist and the ad hoc approaches prevail, in Borrowman's view, because they keep the professional and liberal studies separated. The integrated approach requires more cooperation among potentially hostile faculty and involves the risk of significant compromise. But separated approaches also tend to keep the professional education component more clearly technical and less defined as an area of liberal study. In his "Overview of Research in Teacher Education," for example, Turner (1975) builds from the prevailing common view:

> In teacher education, "training" refers to that component of preparation for which departments and schools of education are specifically responsible. Such training is thus professionally or technically oriented in the sense that the skills and knowledge taught are supposed to have a direct bearing on professional practice. (p. 97)

The professionally or technically oriented training Turner describes, when shaped by large numbers of students and faculty favoring prescriptive knowledge and skill performance, tends to slant the curriculum for teachers away from intellectually deep and rigorous study. Though this tendency has been slowed by reduced emphasis on the competency-based movement, the contemporary curriculum in teacher education continues to distance itself from a strong conceptual and intellectual orientation. The research does not suggest major curricular changes since the Conant and Borrowman studies

of two decades ago, but there is growing evidence that teacher education is becoming more vocational and technical in orientation (Beyer & Zeichner, 1982).

Educational foundations, methods, and practice teaching requirements remain common to the pedagogical studies component, although great diversity remains in the amount of time given to each of these areas. In practice teaching alone, for example, Conant found a range of 90 to 300 required clock hours, and overall semester hours in elementary education ranged from 26 to 59. "With such variation," Conant (1963) noted, "the value of the median, of course, has no significance, though one often finds it quoted in surveys of teacher education" (p. 129). Conant also found the translation of teaching experience into academic bookkeeping most confusing, as did Lortie (1975): "It is difficult to get precise, reliable information on what proportion of the average teacher's undergraduate study is centered on pedagogy and related courses" (p. 58).

The problems of insufficient information and ineffectual reports of central tendency continue, making it difficult to characterize the contemporary course work required of or taken by teacher education students. While some promising new efforts are underway, such as the cross-institutional transcript analysis that Shulman and Sykes have initiated at Stanford, existing data do not allow clear portraits of the explicit teacher preparation curriculum to be drawn.

Indications of general change must be inferred, therefore. Reports that field-based experience has increased (Zeichner, 1981) are supported by observations that state departments of education have mandated more time in classrooms and schools prior to student teaching (Moore, 1979). Additional reports suggest that the social and philosophical course requirements in the educational foundations sequence have been sacrificed to make room for

more technical, field-oriented study (Finkelstein, 1982; Warren, 1982). What some accrediting bodies, state legislators, and other state officials sometimes do not realize is that all curricular additions require a displacement of something else; adding a reading course, for example, may mean dropping a mathematics course. If adding more general field experience across the past decade reduced social and philosophical study, it may inadvertently have increased technical education and reduced opportunity for liberal professional study. Further research is needed to assess this possibility.

Overall general descriptive work on the initial teacher education curriculum was significantly reduced across the 1970s, in comparison with the extensive work completed in the 1960s. But general interest in the curriculum of continuing teacher education understandably grew in concert with growing needs in this area, although little is known about the explicit curriculum here as well.

Once teachers enter professional life, their continuing education becomes difficult to trace and, like teaching itself, professional development assumes a largely private and independent character. There are no traditional content categories or required areas of study in continuing education that parallel those of the preservice institutions, and teachers' decisions to continue their professional education emanate largely from specific personal and professional circumstances. Choices about what course of professional development to pursue, how much to pursue, or even whether to pursue much of anything at all remain a matter of individual prerogative.

One descriptive inventory of teachers' continuing education activities yields radically different profiles of professional development for teachers with comparable experience and teaching assignments (Arends,

1983). A beginning high school biology teacher, characterized as an avid participant in continuing education, logged over 1600 hours in additional course work, independent research, selected conferences and workshops, and school-based decision-making groups over a three-year period; another beginning teacher, described as a reluctant participant, logged only 29 hours of continuing education in the same three-year period. Arends concludes,

> We are left with the impression that the whole process is a large, uncoordinated effort. We found few learning profiles that were very similar, nor could we find many instances where teachers had had the same learning experience. (p. 37)

The relatively private, eclectic, and diffuse character of continuing education thwarts attempts to understand its contribution to teachers' knowledge, competence, and enthusiasm for teaching and makes program effects difficult to evaluate (Stayrook, Cooperstein, & Knapp, 1981; Gall, Haisley, Baker, & Perez, 1982). A further complication is the several functions served by programs of professional development (Little, 1981; Moore & Hyde, 1981; Schlechty & Crowell, 1983; Schlechty & Whitford, 1983), only one of which is the accumulation of technical knowledge and skill.

One function of continuing education is to serve teachers as individual members of a profession. At their best, teachers' individual pursuits add to the range, depth, and currency of subject area knowledge, contribute to the sophistication of curricular and instructional judgments, and add intellectual vigor to professional life. Necessarily, such programs also satisfy bureaucratic and career advancement purposes; they permit teachers to accumulate the record of credits and credentials associated with salary increments. In districts with declining enrollments, participation in inservice education may help teachers to preserve a competitive edge in a tight job market. Formal programs expand the range of career options by

awarding credentials in administration, guidance and counseling, or various specializations.

A second and concurrent function of continuing education is to engage teachers as responsible members of a particular institution. Here, continuing education takes the form of district-sponsored staff development efforts that are frequently targeted to external requirements, including desegregation, mainstreaming, and bilingual education; generally these staff development efforts are aligned with established organizational values, priorities, programs, and traditions. While such programs may attract teachers' participation by offering college credit or other incentives, the curriculum is selected for its relevance to organizational, rather than individual, priorities (Fullan, 1982).

But regardless of purpose or function, it appears that current practice in continuing teacher education is characterized by many of the same qualities and weaknesses known to accompany initial preparation. Gall (1984) and several colleagues surveyed current staff development practices and compared them with research-based recommendations drawn from the literature. To their reported surprise, (Gall, 1984) they found "few activities reflected the sustained multi-year effort that Fullan and Pomfret found required for school improvement" (p. 3). They also found that staff development activities were relatively frequent, but "covered many topics rather than focusing on a few preeminent goals" (p. 3). Interestingly, the teachers they sampled were satisfied with 80 to 90 percent of their activities. Gall (1984) reported that the high rate of satisfaction could likely

> be explained by the fact that 88 percent of the inservice activities were perceived as relevant to their work; 63 percent required little new learning; 78 percent required no out-of-pocket expense; incentives were present for 55 percent; 49 percent were voluntary; and only 6 percent were assessed afterwards. (p. 3)

At the conclusion of the study, Gall (1984) summarized the findings, characterizing staff development "as frequent, but fragmented and without depth" (p.3). This observation remains consistent with both traditional and recent criticisms of initial teacher preparation. Lortie (1975) described teacher education as high on general schooling and low on specialized schooling, and, compared with other professions, the "special schooling for teachers is neither intellectually nor organizationally complex" (p. 58). Comparing the mediated entry arrangements for prospective teachers to other crafts, professions, and highly skilled trades, he described it as "primitive"; practice teaching was not only brief, but "comparatively casual" (p. 59).

The research is unequivocal about the general, overall course work provided for teachers. It remains casual at best and affords a poorly conceived collage of courses across the spectrum of initial preparation and an assembly of disparate content fragments throughout continuing education. The formal offerings lack curricular articulation within and between initial and continuing teacher education, and depth of study is noticeably and consistently absent.

Curriculum traditions for a noncareer in teaching. Some of the most promising curriculum research of the past decade examines the various opportunities for teacher learning in more detail; appropriately, it analyzes their liberal-professional consequences for teaching in contrast to those that force a more technical perspective. The growing need for teachers' life-long learning, or at least career-long learning, makes attention to this classic issue increasingly important.

Traditional analyses of the teacher education curriculum were often restricted to criticisms of the trivial, low level nature of required study, although notable exceptions to this trend were observed (e.g.,

Borrowman, 1965; Dewey, 1904; Royce, 1891; Sarason, Davidson, & Blatt, 1962; Waller, 1932). The typical pattern of overall description complaint and prescription seems to have been broken, however, and a more constructive and enriching trend can be observed in the past decade. Remaining appropriately critical, the more recent work gives specific and detailed consideration to numerous sins of omission as well as sins of commission in the teacher education curriculum. It often focuses on discrete components of the learning opportunities provided and combines empirical study with probing philosophical analysis. Lortie's work (1975) makes a particularly significant contribution and must be considered.

In light of the potentially deleterious effects of classroom teaching on personality and self-understanding, such as those that Waller (1961) and Lightfoot (1983) observed, Lortie (1975) was "impressed by the lack of specific attention to these matters" in the teacher education curriculum:

> Social workers, clinical psychologists, and psychotherapists are routinely educated to consider their own personalities and to take them into account in their work with people. Their stance is supposed to be analytic and open; one concedes and works with one's own limitations--it is hoped--in a context of self-acceptance. The tone of teacher interviews and their rhetoric reveals no such orientation; I would characterize it as moralistic rather than analytic and self-accusing rather than self-accepting. It does not appear that their work culture has come to grips with the inevitabilities of interpersonal clash and considerations of how one copes with them. (p. 159)

Lortie (1975) also observed the absence of the "shared ordeal" in teachers' education that represents an important socializing factor for professionals:

> The functions performed by shared ordeal in academia--assisting occupational identity formation, encouraging collegial patterns of behavior, fostering generational trust, and enhancing self-esteem--are slighted in classroom teaching. (p. 160)

Most prospective teachers go through formal preparation programs individually, rather than as members of cohort groups. Such independent programs of study prevent sets of students taking courses in common, except

at very small institutions and in some of the more innovative programs. Although all students share, in one sense, the ordeal of student teaching and the typically frightening first year of induction, they do so independently as opposed to collectively; as a consequence, these experiences do not induce "a sense of solidarity with colleagues" or "augment the 'reassurance capital' of classroom teachers" (Lortie, 1975, p. 161).

Related to the absence of shared ordeal is the presence of "eased entry" (Lortie, 1975). The time needed to qualify, the arduousness of the preparation, and the complexity of the skill and knowledge base needed for full membership in teaching are all low. The teachers Lortie interviewed described their training as easy, and he reports the absence of a single complaint "that education courses were too difficult or demanded too much effort" (p. 160). Neither did the teachers perceive their preparation as "conveying anything special--as setting them apart from others," and, further, the teachers did not "consider training a key to their legitimation as teachers. That rests in experience" (p. 160).

The lack of rigorous entrance, matriculation, and exit requirements conveys a consistent message. Few applicants getting into college are denied access to teacher education, and few who wish to persist are denied recommendations for certification. The curriculum's easy access and implicit assurances of success provide the opportunity to learn that "anybody can teach." The induction period reinforces this lesson as the beginning teacher comes to learn about the underlying paradoxes in teacher's lives. Spencer-Hall (1982) contrasts the specialized knowledge that teachers are told is required for teaching and the work environment in which untrained substitutes are permitted to teach classes and in which teachers are routinely assigned to new subject areas and grade levels for which they have not been prepared.

In addition to observing the absence of self-analysis, eased access, and the lack of shared ordeal in teacher education, Lortie (1975) also noted the curriculum's lack of power in countering the three components of the teaching ethos he saw as detrimental to continued intellectual growth for teachers: conservatism, individualism, and presentism. These mutually reinforcing factors encourage intellectual dependency and discourage professional development and adaptation to change. Lortie recommended, therefore, as many scholars have before him, a strengthening of liberal-professional studies for teachers.

The implications of his research suggest screening before admission to teaching, particularly with an eye to distinguishing "between applicants who are wedded to the past and those who can revise ideas and practice in light of new experiences" (p. 230). He also encouraged teacher preparation that "could foster orientations of selectivity and personal flexibility," qualities that would require "courses and fieldwork to expand the student's ability to cope with ambiguity and complexity" (p. 230). In addition, such preparation would require a curriculum with frontal attention to the prospective teacher's early learning about teaching:

> Education students have usually internalized . . . the practices of their own teachers. If teachers are to adapt their behavior to changed circumstances, they will have to be freed of unconscious influences of this kind; what they bring from the past should be as thoroughly examined as alternatives in the present. There are perplexing psychological questions in this regard; what teaching methods will be most effective in helping students to gain cognitive control over previous unconscious learning? (Lortie, 1975, p. 231)

Concerned that the preparation of teachers did not "seem to result in the analytic turn of mind one finds in other occupations whose members are trained in colleges and universities," Lortie (1975) noted, in particular, the disinclination to connect knowledge of scientific method with practical teaching decisions:

> Scientific modes of reasoning and pedagogical practice seem compartmentalized . . . those in other kinds of "people work" seem more inclined to connect issues with scientific modes of thought. This separation is relevant because it militates against the development of an effective culture and because its absence means that conservative doctrines receive less factual challenge; each teacher is encouraged to have a personal version of teaching truth. (p. 231)

Like many of Lortie's observations, this too concerns the need for increased professional socialization and liberal-professional study. Although he remained perplexed ("this intellectual segregation puzzles me"), he speculated that it was likely attributable to "compartmentalized instruction" and a curriculum in which education students were not expected "to apply substantive knowledge in behavioral science to practical matters" (p. 231). Although Lortie did not focus on the curriculum fragmentation problem as intensively as others (Lanier & Henderson, 1973), he indicated the need for better integration in formal preparation programs and curriculum revision that would offer significant "opportunities for countering reflexive conservatism among teachers" (p. 232).

Emphasizing the need for more intellectual exchange and enriched experience, Lortie recommended a number of ways that liberal-professional studies could be strengthened: (1) an increase in the number and diversity of classroom mentors; (2) requirements that teachers observe, evaluate, and justify their assessments of a wide variety of teaching styles and approaches; (3) expectations that teachers explicate the reasoning underlying their choices; and (4) opportunities for systematic inquiry during apprenticeship. In addition, Lortie recommended that the curriculum for practicing as well as prospective teachers contain greater opportunities for learning analytical skills and habits of thinking about serious social and educational questions; the important means for acquiring such abilities should be through shared discussion and analysis.

In deliberations of the sort he recommended, reasons for professional action would be emphasized and compared with expressed central values in teaching and with what is known about human behavior. Such collegial discourse was important in Lortie's view because "reflexive conservatism is less readily sustained when people confront others who do things differently but well; the 'critical mass' phenomenon applies to ideas as well as to atoms" (p. 232).

Research completed since Lortie's study clearly shows that the existing curriculum for teachers is heavy with cognitive experience that reinforces the conservative, individualistic, and present-oriented intellectual tendencies he observed and reported a decade ago. A number of scholars have continued to wrestle with and focus upon the central problem Lortie raised: "how to overcome the record of intellectual dependency" when "the ethos of the occupation is tilted against engagement in pedagogical inquiry" (p. 240).

The recurring theme of the growing body of descriptive and conceptual-analytic work is grounded in the search for better understanding of ways the curriculum can facilitate sustained and continuing intellectual growth for teachers. It seeks to uncover the content and process elements of teacher education that now inhibit liberal-professional study in teaching and foster conformist, unquestioning, other-dependent orientations. In general, the findings from these more recent studies suggest that formal learning for prospective and practicing teachers is unlikely to lead to improved cognitive orientations and habits of thought until the curriculum is thoroughly reviewed and revised in such a way that the many subtle and overt lessons that foster intellectual dependency are reduced. In particular, two lines of curriculum research of the past decade better inform understanding in this regard; they include attention to what

students have an opportunity to learn from school experience, and the growing body of studies done on teaching in elementary and secondary schools.

The curriculum of field experience. While the study of pedagogy at the university is often viewed as having limited importance for teachers, classroom experience has been seen, traditionally, as an essential part of initial preparation. As Lortie (1975) documented, experienced teachers also stress the importance of field experience for learning practical skills. But researchers have begun to discover some unpredictably negative learnings from this curricular emphasis on experience. It now appears possible, as well as likely, that substantial amounts of field experience foster a "group management" orientation, in contrast to an "intellectual leader" orientation in teachers' thinking about their work. But this growing set of understandings needs further elaboration.

For the prospective teacher placed in the field, feeling overwhelmed is common. The press of classroom events makes it difficult for even the experienced teacher to attend to individual children (Doyle, 1977; Jackson, 1968). It is hard to tell what each child makes of the content of the day's lesson. In such a situation, the prospective teacher is likely to concentrate on the maintenance of order and on keeping the children attentive. This circumstance has been treated lightly, heretofore, probably because the orchestration of groups of children is so commonplace in the traditions of classroom teaching. Few other professionals conduct their practice on anything other than individuals or small groups of adults. The complexities associated with teaching, where one must deliver professional expertise in a group setting of 20 to 30 youngsters simultaneously is just coming to be understood. But the research suggests that classroom experience tends to place management at the center of

teaching, possibly at the expense of student learning (Hoy, 1967; Hoy & Rees, 1977).

Beginning with these initial field experiences, teachers learn to think that the way to learn more about teaching is through trial and error, not through careful thought and scholarship. What is considered most important is whether a particular technique or approach seems to give immediate practical success (Iannaccone, 1963; Jackson, 1968; Lortie, 1975; Tabachnick, Popkewitz, & Zeichner, 1979-80).

This position has been supported by the research of Fuller (1969, 1970). After observing that few preservice teachers took an interest in learning about psychological theory, she began a systematic investigation of the concerns of teachers and how those concerns change over time. She found that most teachers enter their field experience predominantly concerned with their survivial as teachers, and after these survival concerns have been met, teachers become chiefly concerned with curriculum and impact on students. Fuller recommended that teacher educators not work "against the tide" (Fuller, 1969, p.223), suggesting that theoretically oriented teacher education must wait until concerns about survival have been resolved.

Thus Fuller's work seemed to suggest that initial preparation should focus on management and practical proficiency--to do otherwise would be a violation of some developmental "law." But in fact Fuller has not shown the sequence in which teachers must be taught or even the sequence in which they necessarily ought to be taught (Floden & Feiman, 1981). Nevertheless, her research has increased the pressure on teacher educators to maintain an emphasis on technical skills.

In spite of this pressure, the difficulties of learning from field experience have been discussed since the turn of the century by scholars

from Dewey (1904) to the present (e.g., Feiman-Nemser & Buchmann, 1983; Zeichner, 1980). Dewey, for example, described the danger and promise of field experience as a contrast between what he called the apprenticeship and laboratory approaches to curriculum in teacher education. In the apprenticeship approach, the short time available is used to give teachers the practical skills required to conduct a smoothly running class. The laboratory approach is to use the time to give the student the theoretical principles necessary to understand social and ethical issues in teaching, how children learn, how curriculum decisions might be guided, and how students' cognitions might influence teaching. But adequate opportunities for accomplishing both the laboratory and apprenticeship aims are not available in teacher education as it is presently defined.

This tension between the practical apprenticeship and the more intellectual pedagogy has continued to be resolved in favor of the technical, management approach suited for the noncareer teacher. Emphasis on mastery of management skills may well be adaptive for a teaching population where few teachers remain long in the classroom, but it appears to have serious consequences when career teachers are the norm. What is not learned, apparently, is the set of intellectual tools that would allow teachers to evaluate the quality of the education they are providing or to critically evaluate suggestions for improvement. A model of field experience consistent with the liberal-professional approach to teacher education would strive to produce a deeper understanding of the way theoretical concepts from psychology, curriculum, and sociology are played out in classrooms. Such understanding of children, subject matter, and schools would enable teachers to provide better instruction, make better curriculum choices and participate on a stronger footing in policy debates. Keeping the classroom under control is important, but good

management alone does not focus teaching on children's higher-order learning needs.

Moreover, too much emphasis on learning from experience appears to reinforce the "reflexive conservatism" that Lortie (1975, p. 232) warned of, and makes it more difficult to see the range of possible decisions and actions available in teaching (Buchmann & Schwille, 1984; Floden, Buchmann & Schwille, 1984). For teachers, this emphasis often means a continuation of the teaching practices by which they were taught as well as the tendency to see the prevalent patterns of teaching as the only ones possible. It means a restriction on their views of what they might do as teachers, making it less likely that they will escape from intellectual dependency and begin to take responsibility for decisions about curriculum and students.

The problem is not that field experience cannot be valuable, but that its value is dependent on prospective teachers being properly prepared to learn from it. Studies at the University of Wisconsin on the supervision of student teachers (Tabachnick et al., 1970-80; Zeichner & Tabachnick, 1982) looked closely at ways in which the university staff affected what was learned in field experience. The researchers found that university seminars accompanying student teaching reinforced the tendency to concentrate on mastery of technique and management, rather than encouraging careful examination of experience.

> By focusing upon <u>how</u> things are to be done in classrooms to the exclusion of <u>why</u>, the university originated discussions which tended to accept the ongoing patterns and beliefs illustrated earlier. Instead of responsibility and reflection, the actions of university personnel encouraged acquiescence and conformity to existing school routines. The latent meaning of workshops and seminars were established in a variety of ways. For example, students were continually reminded that they needed to get along if they wanted good recommendations for their job placement folders. The content of supervisory conferences also gave legitimacy to existing classroom priorities . . . What was

> to be taught and for what purpose was seldom discussed between supervisors and students. Technique was treated as an end in itself and not as a means to some specified educational purpose or goal. (Tabachnick, et al., 1979-80)

In a survey of the student teaching programs at a number of colleges and universities, Griffin (1982) similarly found little to indicate that the curriculum surrounding student teaching was arranged to provide the knowledge and inclinations needed for an intellectual career in teaching. If anything, prospective teachers were encouraged to maintain their narrow view of teaching.

It is important to note that not all researchers are critical of the emphasis on management that accompanies stress on field experience. Berliner (1982), for example, has urged that teachers be explicitly trained as managers. He hopes that, in addition to giving teachers management skills not currently included in the teacher education curriculum, calling attention to teachers' management responsibilities will move their social status closer to that of business managers. But those who do no more than manage a business suffer in the same way as teachers who are only managers--they can keep an organization going, but cannot significantly improve or redirect it.

Additional studies on how the limitations of field experience can be overcome are called for, as researchers use their expertise in ways that are increasingly consistent with the liberal-professional approach to teacher education. The learning opportunities that will help prospective and practicing teachers acquire needed technique in ways that keep management in the background and student learning in the foreground are yet to be discovered.

The place of research in the teacher education curriculum. The absence of a firm knowledge base for teacher education has led to a long-standing and wide-ranging search for the sort of expertise that would be helpful to

the practitioner and at the same time raise the status of teacher education in the academic community. For many years, the methods and literature of educational psychology seemed to promise the most in this respect. Widespread acceptance of the diverse orientations of research psychologists fostered an instrumental view of research on teaching, a view marked by its concern for linear causal analysis, generalization across teachers, and prescription of good practice.

In the hands of advocates such as Brophy, Good, Berliner, and Gage, the approach evolved into one of identifying strategic clusters of teaching behaviors and principles, analyzing their consequences for student outcomes in clearly specified contexts, ultimately designing interventions on the basis of earlier research, and evaluating the results with appropriate quantitative or qualitative methods. Brophy (1980) articulated one of the dominant presuppositions of this approach as follows:

> The key to improvement has been to concentrate on developing knowledge about effective teaching and translating it into algorithms that teachers can learn and incorporate in their planning prior to teaching . . . (p. 3)

This approach has explicitly or implicitly encouraged the idea that the findings of research on teaching could be translated directly into content to be mastered during teacher education (Zumwalt, 1982).

Research on teacher education (as opposed to research on teaching) soon followed the same tack. Studies were designed to establish the practicality of research-based teacher education and, in particular, to show that appropriate skill training alters the knowledge, skill, and attitudes of teachers (see, e.g., Anderson, Evertson, & Brophy, 1979; Crawford, et al., 1977; Emmer, et al., 1981; Good and Grouws, 1981). Such projects include a staff development treatment based on earlier process-product research, the latter having shown that certain principles

and practices of instruction are strongly related to student learning of basic skills. Materials to support the treatment are designed and come to serve double duty as training manuals and research interventions. Initial and follow-up meetings with teachers offer researchers a method for assuring faithful implementation, while at the same time offering teachers the opportunity to learn more thoroughly the skills being offered.

One consequence of these field experiments, skill studies, and studies of implementation has been the emergence of an unanticipated debate over how minimal a successful intervention can be. Some researchers argue that even brief, inexpensive treatments can bring about significant results (Good & Grouws, 1979), and a number of researchers have pursuead related efficiency questions.

Coladarci and Gage (1984) tried an extremely minimal intervention; they mailed a series of teacher training packets to teachers and then observed to see if the teachers implemented the recommendations contained in the packets. Though they found no significant change in teaching practices or student achievement, they remained hopeful that some sort of minimal intervention, in which giving teachers additional technical skills would be enough to improve both teaching practice and student achievement. Their recent search suggested needed ajustment in their minimal interventions, however: "It appears that for an intervention to be successful, the project staff must be engaged with participating teachers in some fashion" (Coladarci & Gage, 1984).

Twenty years of experimental and quasi-experimental research have confirmed that some classroom practices lend themselves well to skills training. Teachers can learn a variety of instructional skills from such projects and they can demonstrate them in simulated or actual classroom

situations (Joyce & Showers, 1981; Peck & Tucker, 1973). Effective features of such skills training programs include clear statements of objectives and rationales, adequate demonstration, well-designed materials, and opportunity for practice and feedback. Hypotheses about the consequences of giving teachers assistance in the classroom have also been partially tested (Showers, 1983; Mohlman, 1983; McFaul & Cooper, 1983; Wolfe, 1984).

But while this approach has been successful in terms of the limited objectives of each study, the research as a whole has not seemed to cumulate into a more coherent understanding of teaching and teacher education. Although the studies could be criticized for their methodological orientation, it has gradually become clear that the issues are not primarily ones of choosing the best methodology for arriving at truth about teaching or teacher education, but rather in large part an ethical and epistemological matter of defining an appropriate role for the researcher, exploring the nature of appropriate relations between researchers and practitioners, and making explicit or implicit assumptions about the knowledge that practicing teachers already possess.

Insight into the nature of these issues has come from the work of other scholars in teacher education, such as Buchmann, Feiman-Nemser, Fenstermacher, Floden, and Zumwalt. They have pointed out that recent expert-designed programs for training teachers encourage practitioners to think narrowly about their work. The prescriptive approach tends to place the researcher in the role of external expert, in contrast to that of a professional colleague. The external expert role is particularly difficult for scholars engaged in research on teaching to avoid in teacher education, because the expectation of many practicing school professionals includes a "tell us what we should do" orientation.

By focusing on classroom management and low level intellectual skills, however, the expert-designed research implicitly endorses a view of education that is most suitable for brief, technical teacher education: a curriculum possibly suitable for noncareer teachers, who have limited subject matter knowledge and a dependence upon the curriculum materials produced by others. Buchmann (1983, 1984), Fenstermacher (1979, 1980), Kepler (1980), and Zumwalt (1982) all found that approaches in which teachers were told what to do, although perhaps effective in changing some teacher behaviors, do "not acknowledge the rationality of teachers and place the researchers in an undeservedly superior position in which teachers were not able to assess the worth of what they were being told" (Floden, in press).

This "superior position" is implicit, not only in the fact that prescriptions are given for teachers, but also in the "scientific" style in which research reports are written. Educational research, perhaps especially research on teaching, is an uncertain science. Inferences are always tentative and often dependent on implicit assumptions about the purposes of education and the criteria for judging the worth of teaching. Yet little of this uncertainty and value-dependence is communicated in the typical research report used as part of the initial or continuing teacher education curriculum (Buchmann, in press).

Buchmann (1983a) points out that the very emphasis the academic community places on verbal acumen makes it difficult for teachers to see themselves as competent to think through educational issues. While there is value to clear thought and careful argument, there is no need to throw out the wisdom gained from teaching simply because teachers have not been able to cast this wisdom in compelling verbal form:

> We have no reason to assume that premises that need to be guessed at, terms without clear definitions, oblique references, and beliefs that are not debatable, must be associated with wrongheaded ideas or indefensible lines of action. (Buchmann, 1983a, p. 12)

Teachers understand that teaching is context-dependent and usually does not lend itself to straightforward generalization and prescription.

The critics have no wish to abandon research on teaching. They agree that research is valuable for the improvement of teaching practice, provided there is change in the ways research impinges on practice. Fenstermacher and Zumwalt advocate using research studies as the starting point for serious discussion of educational issues. Rather than accepting the conclusions of research as prescriptions for action, teachers can compare the results to their own prior understanding. "When seemingly definitive results are contrary to one's own beliefs, the motivation to delve further is greater" (Zumwalt, 1982, p. 230).

Deliberation regarding inconsistencies between one's own beliefs and the results of research serves several purposes. It gives guidance and practice in reasoning about educational problems. It reveals the uncertainty of research results. It gives teachers the habit of calling both their own beliefs and the "conclusive" claims of researchers into question. According to Buchmann (1983a piece), however, an emphasis on discussion of specific research studies can be too restrictive and too much oriented toward the ideal of research, which is truth, in contrast to the ideal of practice, which is wise action.

In further countercriticism, Floden (in press) asserts that these recommendations for change in the teacher education curriculum are valuable for their emphasis on helping teachers to think independently about education, but they tend to stress independence of thought without showing how standards for reasonableness in discussion will be learned. Career

teachers need to break away from their intellectual dependency, but without adopting the position that individual opinion need have no grounding in fact or argument (Euchmann, 1983b). One role for teacher educators is to strike a proper balance between encouraging independent thought and pointing out errors in reasoning or observation.

Legitimate questions are sometimes raised about the value for career teachers of a capacity for intellectual analysis and reflection, implying, at times, that support for this stand is just an ideological plea, no more worthy of attention than competing claims. But research analysts have not shunned the issue: Is it mere prejudice? What is wrong with the teacher or teacher educator who places sole emphasis on management and technique, who is satisfied for students to master low level cognitive skills at the expense of more complex reasoning capacities?

To be sure, educators have reached no agreement on the definition of good teaching. This remains an important difficulty for research on teaching teachers (for an extended discussion of this point, see Lanier & Floden, 1977).

The cynic concludes that all discussions of desirable or undesirable qualities of teacher education are mere prejudice. Perhaps they are, but they may not be prejudice in the pejorative sense. In "The central place of prejudice in the supervision of student teachers," Hogan's analysis (1983) suggests that prejudgment--prejudice is the necessary basis for interpretation of all events. Such pre-judgment is not unthinking partisanship, but the necessary reliance on concepts used to make sense of the world.

In thinking about teaching or teacher education, the particular starting point is open to debate. But any starting point can be the basis for worthwhile discussion and study if it is held provisionally, if it is

open to correction. For those studying and judging the education of teachers, it is "appropriate to recognize the continual possibility of bias in all our judgments and seek actively to have even our most circumspect judgments modified and corrected in our dealings with student teachers and colleagues" (Hogan, 1983, p. 41).

Hogan (1983) argues that, ideally, scholars in teacher education should model this reflective role, inviting criticism from others and recognizing the worth of what others have to say. It is a Socratic role, worthy of intellectual respect, but few teacher educators have been traditionally viewed in this manner. The obsession with technique and management continues even though its shortcomings have long been recognized. Some of the reasons the field has been effectively sidetracked for so long should not be overlooked.

Why Might the General Curriculum for Teachers Be As It Is?

Assuming that some of the more classic criticisms of the teacher education curriculum are valid, possible explanations can also be explored through research. Why, after all, should the curriculum for those responsible for educating the youth of one of the world's most technologically advanced nations remain largely arbitrary, technical, fragmented, and without depth? If the problem were unknown, or had gone unrecognized by the general public it might be less perplexing. Again, the social and historical studies (Lerner, 1979; Lortie, 1976; Mattingly, 1975; Powell, 1976; Tyack, 1967) are informative, for they suggest several major influences on the evolving development of teacher education in America. These influences include the following:

1. the rapid expansion of schooling in the late 1800's, with its accompanying high demand for elementary and secondary school personnel;

2. a social response to this demand that accommodated domestic roles for women, upward mobility aspirations of lower class men, and the institutionalization of school teaching as employment appropriate only for temporary, secondary, or part-time workers;

3. an institutional accommodation to this transient work force, which standardized brief technical training for teachers and reliance on external expertise for occupational direction; and

4. a lengthy adherence to a single dominant research paradigm in education that brought quantitative scientific study to bear on large social issues and problems of school administrators and specialists, but neglected the problems of teachers and teaching and the codification of good classroom practice.

Many of the contemporary and past problems with the teacher education curriculum originate with the deleterious effects of prolonged classroom teaching, a difficulty long recognized by career teachers in America (Lines, 1982; Mattingly, 1975; Powell, 1976). Until the nature of the job demands in teaching change, talented persons will continue to escape after only a modest period of service. Perhaps the occupation would have already undergone the needed adaptation and revision if it had not been for the rapid expansion and massive availability of schooling in America.

The extraordinarily large increase in the need for teachers around the turn of the century, that is, from a demand for 9,000 in 1890 to a demand for 42,000 by 1910, provided a temporary solution to the already recognized career problem for teachers, at least for male teachers. The educational expansion created a dual opportunity for upwardly mobile, frequently religious schoolmen who were seeking both personal advancement and social improvement. Careers in administration, supervision, and other non-teaching specializations permitted their participation in the creation of an exciting new social mission:

> schools could now hope to manage the transition of all youth to the needed adulthood of a new civilization; and schools of education could train professionals to be the managers. (Powell, 1976, p. 6)

And train managers they did, although such training soon brought unintended negative consequences for teacher education. While the expansion of administration, supervision, and other specializations provided new career opportunities for men impatient with the conditions of teaching, it also changed the investment priorities of education faculty at the university. Powell (1976) observed, "More and more these nonteaching careers, rather than teaching itself, were considered the most important careers toward which both ambitious schoolmen and ambitious schools of education should direct their principal attention" (p. 6). The consequence for the mission and curriculum in schools of education was a significant shift away from serious concern with teaching.

Primary attention was soon given to graduate training in administration and other specializations, such as research and evaluation or counseling and guidance. Of secondary importance, the education of teachers became increasingly segregated and limited to undergraduate study. Advanced periods of academic study at the university for the transient work of teaching appeared neither practical nor needed. For most women, teaching was still viewed as secondary to their "real" occupation of housekeeping and child rearing. For most men, teaching was viewed as secondary to their aspirations for more influential positions in such areas as university teaching and school management, where important policy issues in education could be decided. The resulting teacher education programs came to be affected by and subsequently came to affect the status of teaching in America; they provided, as Powell observed, "a stable organization for the education curriculum which reinforced the emerging hierarchical career structure of the profession" (p. 9).

The early norms created for teacher education at the university thus accommodated the adult society that was apparently well served by such an

arrangement. The curriculum for teachers could legitimately be brief and piecemeal; to make it otherwise would mean that great energies to assure length and coherence in the curriculum would largely be in vain, given the occupation's transient membership. Needed continuity and guidance for educational policy and practice in schools could be provided by professional managers and specialists, who could, and in fact did, acquire more and better knowledge than the transient teacher majority.

The historical evidence suggests, therefore, that a norm of intellectual dependence on external expertise was established for teaching in America in the late 19th century. The low level and haphazard nature of the teacher education curriculum was unquestionably functional for the majority of teachers at that time. Fragmented, unconnected content as well as the absence of depth and professional socialization provided needed flexibility and ease of entry, exit, and re-entry for women whose primary occupational goal was domestic work. In addition, the modest investment of one's individual resources in preparation matched the modest occupational returns reasonably well. Teaching was a respectable stopping-off place for most men and women enroute to doing, or already doing, what they considered to be more important work. Under such conditions, it seemed inherently sensible for teachers to turn to persons outside of the classroom for responsible, informed decision making. Borrowman's study (1965a) supports this line of reasoning and indicates how the early teacher educators rationalized the low-level intellectual needs of the teaching majority. For the period of time that teachers remained in the classroom, it was expected that they would be prepared for

> teaching a curriculum prescribed by the board of education, through texts selected by that board or provided on a chance basis by parents, and according to methods suggested by master teachers or educational theorists, most of whom had been well educated in the colleges. (p. 22)

The curriculum that emerged for teachers at the university does not appear unreasonable in this light, and one can understand why, as Powell (1976) observed, "courses were given and taken for their immediate value on the job, at best, or their mobility value on transcripts, at worst" (p. 12).

With school teaching viewed as secondary in importance and primary attention assigned to administration and other specialized training, the development of the knowledge base in education was similarly affected. Although three general strategies for developing knowledge in education were originally employed in leading schools of education, one came to dominate; it was the least appropriate for addressing the problems of teaching practice (Powell, 1975).

One approach, as represented by G. Stanley Hall's work, employed elements of natural science inquiry and focused on the collection of vast amounts of data about children in school. A second sought to capture the wisdom of teaching practice by examining written and unwritten records of educational products and events that promised to inform future generations about lessons already learned. This latter approach assumed that many ideas about good practice already existed and needed to be made available through collection, synthesis, codification, and effective presentation. As in law and theology, which do not owe their professional status and knowledge base to scientific research, major efforts to discover and describe exemplary practice were meant to reduce the need to reinvent and redefine innovations with each new generation.

Notably, both of these approaches focused on the study of classroom teaching and learning. This made them vunerable to attack and easy to dismiss with the legitimacy of the scientific movement in education. Rejecting mere observation and turning to controlled experimentation, the education faculty could obtain greater status and respect at the university

and could readily support the work of their primary student clientele and leading graduates--administrators and other school specialists. Powell (1976) reports that "the adoption of the laboratory method helped to eliminate the teacher as a subject of inquiry at the same time that many training programs relegated the teacher to ancillary status" (p. 10). Concomitantly, these tools of science gave added prestige and power to the policy-making leaders in the schools who quickly gathered the data they considered most important and worthwhile to their work:

> Quantitative measures could assess convincingly the performance of large groups of students and thus indicate the quality of entire schools or school systems. Intelligence and achievement tests could classify large numbers of pupils quickly and thus make more defensible the increasingly specialized nature of schooling as well as of the profession. Educational research, in short, had been enlisted to help solve the problems faced by administrators and specialists. (p. 11)

The predominantly quantitative and experimental research approach to the development of a knowledge base in education relegated description of good teaching practice to minimal status until only the past several decades. More recently, however, alternative approaches allowing for rich description and logical deduction analyses have been resurrected and focused again on the study of classroom teaching and learning. The visible shift away from a single dominant research paradigm has enriched the study of teaching practice and has begun to afford better understanding of research issues in teacher education.

Summary: Research and the Teacher Education Curriculum

The increasing proportion of career teachers makes the often-repeated call for a liberal-professional approach to teacher education all the more persuasive. The tension between liberal and technical approaches should not be resolved by the elimination of one or the other, but

preparing career teachers for their continuing education requires greater emphasis on liberal-professional studies than is presently the norm.

Unfortunately, changes in the teacher education curriculum have tended to move it in the opposite direction, giving increased dominance to the mastery of skills with immediate practical value. What is worse, studies of the curriculum of initial and continuing teacher education show it to be fragmented and shallow.

Recent research has given a more detailed picture of these weaknesses. Lortie (1975) has shown how the ease with which teachers can enter and complete their initial preparation communicates the message that little knowledge is required to be a good teacher. The way field experiences enter the curriculum push teacher candidates even more in the direction of a technical orientation.

The relationships between the study of teaching and the curriculum for teachers have received major attention from scholars who have examined the various intellectual consequences that alternative approaches to gathering and sharing information with teachers are apt to have. Particular attention has been given to the intellectual dependence or independence these approaches are likely to foster in teaching (Buchmann, 1983; Fenstermacher, 1978; Kepler, 1980; Popkewitz, Tabachnick, & Zeichner, 1979; Zumwalt, 1982). This recent work also provides important perspectives on the problems associated with the all-too-common view that research provides the only key to an authoritative knowledge base for education. But teacher education is only beginning to address these complex issues in the curriculum for teachers, and ample room for progress remains, particularly as it relates to the codification, preservation, and transmission of the lore of successful practice.

Slowing the process of change and adaptation is the evolutionary nature of formal education in America. In spite of the many demands for revolution and reform in teacher education, the rate and pace of the inter-institution adaptation required for schools and universities is apt to be slow. The curriculum for teachers is evolving from an earlier period when it was constructed to meet the needs and lifestyles of a very different generation of men and women. It is now more apt to change, however, because the teaching force of today and tomorrow will likely be educated for life-long careers in teaching. Accompanying this new challenge is the need to provide curricula that are deep, scholarly, coherent, and related to continuing a liberal education throughout one's period of professional teaching.

Studying the Teacher Education Milieu

Research on the social, political, and economic factors related to teacher education confirms that which is obvious to the thoughtful observer: Power and prestige are lacking. But if "schools can rise no higher than the communities that support them," as Boyer (1983, p. 6) has suggested, then better understandings of the communities responsible for teacher education are important if constructive change is to follow. The evidence suggests, overall, that communities responsible for teacher education in the United States have been derelict in the exercise of their charge to provide quality programs and public assurance of well prepared teachers. The higher education, public school, and professional communities of which teacher education is a part maintain loose and sometimes antagonistic relationships with one another, generally accepting teacher education as a tolerable second cousin. The reasons for these general conditions are not well studied, although there is some theory and research to guide contemporary thinking on such matters.

The Higher Education Community and Support for Teacher Education

The support given to teacher education programs at the university can be understood by examining three factors: (1) the faculty effort assigned to and evaluated for making specific contributions to the program, (2) the financial resources invested to support the program, and (3) the oversight the university provides to ensure that teacher education is responsibly administered. The evidence of low support for teacher education can be readily observed when such factors are considered.

Faculty investment as an indicator of support. Difficulties with identifying the teacher education faculty responsible for this large, uniquely administered, all-university program are treated earlier in this chapter. All but a small portion of the program faculty are involved only tangentially in program efforts. In relation to the large proportion of students pursuing careers in teaching, few faculty have official time assigned to teacher preparation and fewer still are identified with and evaluated for their specific contributions to teacher education.

The problem of low faculty identity and participation is especially acute in the most prestigious universities and schools of education. Commissioned by the Ford Foundation to study America's leading schools of education, Judge (1982) reported on the faculty's consistent tendency to "distance itself from the confused and unattractive world of teacher education" (p. 9).

For secondary teachers, in fact, the most influential professionals are often cooperating teachers who volunteer to supervise practice teaching in the schools. These persons spend more time with the student than any other faculty member and are generally provided with a token payment (possibly $50) to serve, in effect, as adjunct faculty members of the institution of higher education (Clark & Marker, 1975).

While studies have suggested that universities are supporting more teacher education faculty today than they have heretofore, such reports are misleading. Feistritzer (1984) suggests, for example, that while "enrollments in teacher education programs are dropping precipitously, the numbers of faculty teaching in them are not" (p. 34). Unfortunately, the data presented in support of this assertion are grounded in the number of full-time faculty assigned to schools, colleges, and departments of education as a whole, in contrast to the number of full-time faculty

working in the all-university teacher education programs at the institution. As indicated earlier in this chapter, many faculty in academic units with the word "education" in their title never associate with teacher education programs, or have only a very minor role to play in them. Instead, many of them prepare school administrators, counselors, psychologists, media specialists, policy makers, reading diagnosticians, educational researchers, and instructors for business and industry; in effect, most of them prepare professionals for other than school teaching roles.

Financial investment as an indicator of support. Research conducted in the past decade also suggests that the record of financial support for teacher education is low. The institutional analyses conducted by Clark and Marker (1975) showed that "teacher training is a low prestige, low cost venture in almost all institutions of higher education (p. 57). Peseau and Orr (1979, 1980, 1981) initiated a longitudinal study of teacher education funding in 63 leading institutions across 37 states. Their work has revealed a consistent pattern of apparent underfunding. Discussing the adequacy and equity of the 1979-80 resource base for teacher education, Peseau (1982) reports:

> The average direct cost of instruction per year for preparing an undergraduate teacher education student was only 65 percent as much as for a public school student, and only 50 percent as much as the average cost per undergraduate student in all university disciplines; and in only 9 of 51 university teacher education programs was the direct cost of instruction as much as for a public school student in 1979-80. (p. 14)

Analysis of data from their third annual study also suggests that teacher education students pay an undue share of their higher education costs. Assuming that tuition is generally expected to cover approximately 20 percent of the costs of education and about 40 percent of the direct costs of instruction (college budgets only), Peseau (1982) found that in 30

of the 52 universities studied during 1979-80, teacher education students "paid 50% or more of the direct costs of instruction; 75% or more of those costs in 17 universities; 90% or more in 12 universities; and 100% or more in 8 of those universities" (p. 14).

The reasons for what Peseau and Orr (1980) call "the outrageous underfunding of teacher education" are grounded only partially in state funding formulas, which generally place teacher education with undergraduate programs of low complexity. Using the state of Texas formula and complexity index as a base, Peseau and Orr (1980) compared others to this model and found that "most states follow the Texas example; that is, they view teacher education programs as less complex than other university programs for funding purposes." Aspects of the Texas complexity index thus provide a base for comparison:

> At the undergraduate level the lowest of the complexity indexes is 1.00. Teacher education is indexed at 1.04; this contrasts with 1.51 for agriculture, 2.07 for engineering, and 2.74 for nursing. Indexes at the master's level range from 1.75 for law to 5.77 for veterinary medicine. Teacher education is indexed at 2.30 and compares with 3.27 for business and 5.36 fo science. Differences at the post-master's level are even more dramatic. Here teacher education is indexed at 8.79; the index for business is 13.45, agriculture 16.52, nursing and engineering 17.60, fine arts 17.71, and veterinary medicine 20.53. (p. 100)

But the relatively low assignment of complexity by the state does not explain the underfunding that typically follows. The problem comes, apparently, from one of two common situations. Each state chooses to allocate resources based on its own historical pattern, which builds on traditional assumptions unfavorable to teacher education in the distribution of funds (Temple & Riggs, 1978) or, once basic financial resources are provided, university administrators reallocate funds, giving less to teacher education and more to programs that, in their judgment, either deserve or need more support (Orr & Peseau, 1979).

Clark and Marker (1975) and Kerr (1983) tie this problem of underfunding to teacher education's place in the undergraduate curriculum and reason that it is unlikely to change until teacher education is removed from this position and made a part of graduate study only. Nevertheless, it should be noted that nothing officially prevents giving more support for teacher education at the undergraduate level, just as nothing officially prevented giving it less in the beginning. Nevertheless, Kerr (1983) suggests why change at the undergraduate level is unlikely:

> The cat is left chasing its tail. Without a substantially higher allocation index, pedagogical faculties cannot possibly develop the complex and sophisticated clinical studies that teacher education sorely lacks; without highly developed and demonstrably successful clinical programs in place, universities would most likely be unwilling to adjust the index. Most certainly the index could not be increased sufficiently if it is bound to undergraduate norms. (p. 136)

Supporting this argument, Clark and Marker (1975) suggest that

> the difficulty arises in trying to fit professional preparation, especially preparation that is field- and practice-oriented, into the classic mold of undergraduate lecture courses where students end up being taught to teach by being told how to teach. (p. 57)

Peseau (1982) suggests that the poor financial conditions contribute to conservative thought and behaviors on the part of faculty most closely associated with teacher education: "Financial starvation in academic programs is analogous to nutritional starvation in biological organisms. Both result in inadequate development and extreme conservatism of behavior" (p. 15). Building on their findings and years of association with education leaders involved in such studies, Peseau and Orr (1980) express frustration with the apparent means of coping with low prestige and low funding:

> Perhaps the most distressing generalization one can make about professional educators is that they tend to accept expanded responsibilities without having the resources to meet them . . . This fact reflects the profession's unwillingness to define its goals and insist on reasonable support. (p. 100)

Oversight for responsible administration as an indicator of support. Scholars of the past decade have brought a new level of understanding to the complexities associated with teacher education programs in higher education. Earlier interpretations of factors inhibiting effective administration and governance of teacher education programs were typically associated with the education establishment itself. Conant (1963), Koerner (1963), and Silberman (1970), for example, seemed to envision a relatively close-knit, compatible set of protective, professional groups working in concert with one another to perpetuate the status quo.

But the metaphor of a gigantic, lethargic bureaucracy in teacher education is hardly apt; there is almost a total absence of bureaucracy functioning in teacher education. Clark and Marker's institutional analysis (1975) vividly reveals the more accurate characterization: Rather than like-minded organizations working in concert, they observed "idiosyncratic organizations, each assigned 'a piece of the action' and functioning in a state of accommodation, not to protect mutual interests but to avoid irreconcilable conflicts" (p. 74).

Analyzing the inhibitors to improvement and reform in teacher education, Lanier (1984) reported similar observations and offered an alternative metaphor to that of a unified and oppressive educational establishment:

> The major problem that makes change and improvement exceedingly difficult in teacher education is the diffuse nature of program responsibility and accountability. Too many warring factions control various small pieces of the enterprise. Consequently, each of the participating parties is weak and no single group is powerful enough to exercise responsible leadership that might significantly change the status quo. Coalitions rarely are possible, since the various actors share little mutual interest and trust. . . . The situation is analogous to the current scene in war-torn Lebanon, where numerous factions with multiple, contradictory, narrow, and self-interested concerns continue to fight and further a growing anarchy. The loser, of course, is the country as a whole. (p.2)

A college or university can provide support for teacher education by making sure that responsibility for teacher education is clearly assigned. A task for which no one is clearly responsible is unlikely to be completed well. Unless some administrative unit is given the authority and concomitant accountability, teacher education will not be well taken care of. To support teacher education, someone in the university community must oversee governance arrangements to see that someone takes charge.

Locating the administrative units responsible for the education or miseducation of America's teachers in higher education, however, is at least as difficult as attempts to locate the teacher education faculty. In their institutional analysis, Clark and Marker (1975) found, for example, the assignment of responsibility without authority and authority without responsibility, as well as resource allocations distorting functions, form determining substance, and "political compromises, external to teacher education, controlling the quality of the education of teachers" (p. 74). Their findings led them to conclude that

> few organizations could survive, to say nothing of perform, with the bizarre disjunction between assigned functions, authority, and responsibility which exists in the institution of teacher education. (p. 75)

One basis for these strong conclusions is that people mistakenly have assumed that the primary responsibility and authority for the program of teacher education rest with an academic unit entitled "education." Clark and Marker (1975), however, observed that education units provide only 15 to 20 percent of the preparation of secondary teachers and half of this portion is given over to the public school; the public school has "no formally assigned role in teacher education and its participation is dependent on its willingness as an agency, and the classroom teacher's willingness as an individual, to assume an "extra load" (p. 75). They

emphasize that the arts and science components within institutions of higher education are organized with little, if any, thought given to the function of teacher education, even though a significant portion of their student population is in teacher education. Their evidence showed

> The bulk of the academic training of all teachers, and 80 percent of that of secondary teachers, occurs with the faculty of arts and science, but if the function is considered to be the "business" of this unit at all, it is considered an ancillary function. (p. 75)

These findings led them to conclude that the structure provides a basic framework for "organizational irresponsibility"; it not only provides "endless opportunities to avoid accountability," but also makes available to each participant in the enterprise "a rational posture to justify the avoidance" (p. 76).

In this chaotic situation, no faculty group is seen as the final authority on questions about teacher education, a situation far different from that for other academic programs at the university. In fact, the faculty most closely associated with the program, that is, the education faculty, actually are afforded the least power to effect change or exercise responsible oversight. Studies show that the all-university committees and councils that were encouraged by Conant (1963) exist in the majority of institutions of higher education that prepare teachers, and these councils continue to be dominated by faculty from academic units other than education (Dearmin, 1982). In her study of these all-university councils, Dearmin (1982) reported

> No other aspect of the survey produced wider variance than responses to the query, "To whom does the council report?" Twenty-eight different reporting patterns were described. And the variance appeared as great for the councils described as very effective, as it did for the councils generally. Is it possible that the university structure does not know what to do with these strange units which are neither fish nor fowl? Or are university reporting structures inherently very different across institutions? Or do councils tend to seek the level of influence the institution desires them to have? There is some evidence in the survey responses to support the latter. (p.4)

Understanding the factors inhibiting quality control. The reasons higher education provides such minimal support for teacher education in the manner here described are grounded in the larger social context of the general society and in the institutional traditions that have evolved in the modern American university. Part of these problems can be explained in terms of the reasons the teacher education curriculum was constructed to accommodate a short-term, part-time, noncareer orientation in teaching. These reasons were presented in the prior section of this chapter and need not be discussed here, although the low support that is attributable to the occupation's formerly high rate of turnover must not be overlooked. Nonetheless, these reasons alone do not provide sufficient understanding.

The most common argument put forward for the low support accorded teacher education is that its knowledge base is weak and questionable. Scholars have reasoned that respected professions are so recognized because of

> a validated body of knowledge and skills subscribed to by the profession, passed by means of preparation programs to the inductees, and used as the basis for determining entrance to and continuance in the profession. (Howsam, Corrigan, Denemark, & Nash, 1976, p. 3)

But this argument begs the question of why, traditionally, there has been such meager investment in the development of the knowledge base for teacher education itself. Few financial and human resources are provided by higher education for studying the problems or successes of teaching and learning in the nation's schools (Guba & Clark, 1978; Powell, 1976). The social context of teacher education in higher education may be better understood when the typically underplayed issues of social status, power, and displaced class conflict are taken into account.

The institution of public schooling in America remains conservative and relatively slow to accommodate a responsible, intellectual role for

professional teachers; so does higher education. The maintenance of teacher education as a nonprofession is comparable to the maintenance of teaching as a noncareer. Those in power, quite naturally, support those arrangements that best serve their interests; change to accommodate the interests of others will usually be resisted (Cusick, in press).

Change is particularly difficult in teacher education because the occupation serves two groups traditionally weak in institutional influence: women and children. While legend has it that emergency situations provoke a "save the women and children" attitude, such does not seem to be the case in the more mundane activities of life, such as those encountered in teaching children and teaching teachers. Teaching in America has been and continues to be the single largest line of professional work comprised predominantly of college-educated women, and teacher education is supposed to enhance this important female-dominated occupation. However, the actual consequences of such a concentration of women are more like those discussed by Margaret Mead in one of her anthropological studies. She observed

> There are villages in which men fish and women weave and in which women fish and men weave, but in either type of village the work done by the men is valued higher than the work done by the women. (Porter, 1983/84, p. 2)

Even now, as various groups work to change these traditional circumstances, there is more invested in getting women access to what has traditionally been men's work than there is in upgrading the quality of that which has traditionally been women's work. Women remain concentrated in a small number of technical-skill dominated occupations (teaching, nursing, waitressing, household work, retail sales, and secretarial work). Across the board, these occupations are characterized by lower pay and less education (Bureau of Labor Statistics, March 1982).

In addition, the low status of teaching and teacher education has to do with the fact that teachers' clients are children (Geer, 1968). Other professionals and business managers gradually build up a circle of clients whom they can select to some degree. Association with this circle can raise the business manager's status if the clients have high status. Continued interactions with clients outside work can give access to information and selective institutions. But teachers' clients do not bring these advantages. Teachers not only have little choice about which children will be their clients, but development of long-term relationships is difficult because teachers typically receive a new set of students each year. Finally, teachers' clients are of even lower status than teachers themselves.

> Children and adolescents (despite many cries of alarm to the contrary) are a powerless group in society, and the fact that school teachers serve minors rather than adults means that they are deprived of opportunities available to other service occupations to establish useful and prestigious relationships during their daily work. (Geer, 1968, pp. 228-229)

Status is important because teacher education operates in a competitive marketplace. Competition affects institutions in different ways. Institutions with a tradition of strong scholarship are pushed out of the business of teacher education into fields where they get better value for their work. Other institutions feel the press to maintain enrollments, and some, but by no means all, respond to this press by lowering admission standards.

While a number of the leading schools Judge (1982) studied carry responsibilities for undergraduates, he observed that they "perceive themselves, and wish to be described as graduate schools" (p. 5, emphasis in original). Judge attributed this "deliberate choice . . . to distance themselves from both the task of training teachers for elementary and

secondary schools and that of addressing the problems and needs of schools" (p. 6) to a "series of flexible hierarchies of function and esteem" (p. 4) in which universities and colleges have come to be arranged. Observing the market-driven nature of American higher education, Judge reasoned that "an institution can survive only by being competitive" (p. 43), but in this context teacher education lacks the power and resources for obtaining a reasonable competitive edge. He described the problem as follows:

> The rules of the competition are not set by graduate schools of education, and the rules cannot be altered by the schools. Moreover, the rules are powerful in two different fields of rivalry. Education can compete with another professional school only insofar as it is linked with a powerful, organized, prestigious profession. In that sense its capacity to represent itself is limited by society's view of the status of teachers and other members of the educational profession. Similarly, its power to attract students of quality depends upon its reputation for success in advancing the careers of these students . . . and bringing assured financial and professional rewards.
>
> The second field in which the rules of competition apply . . . is to national comparison and ratings, which in turn are equally dependent upon scholarly achievement. The pursuit of these achievements leads to a modeling of the school on standards of research prevalent in arts and sciences and, by implication, to neglect of the more sharply professional functions of the school. (p. 44)

In other words, Judge sees the faculty in leading schools of education in the United States caught in two relatively hopeless competitions for support and respect; one competition is with the more prestigious professional schools and the other with the basic arts and sciences. Since teacher education left the normal schools and came to higher education, faculty concerned with teacher preparation have not been able to compete on an equal footing with either.

The status and power assigned to the established professions are formidable, and the rules of the game that must be followed in competition with the arts and sciences faculty press teacher educators to abandon their obligations as faculty concerned about quality professional preparation.

The reward system in the prestigious institutions of higher education thus affects the career development of faculty in ways that detract from teacher education. In most such institutions, faculty are obliged to demonstrate expertise through independent inquiry, and status is not generally attached to undergraduate teaching, especially when the undergraduates are visibly associated with a low status, low ability group of prospective teachers (Clark & Marker, 1975; Judge, 1982).

Faculty and administrator interviews conducted by Judge (1982) reveal that faculty in the arts and sciences

> regard education courses as a distraction for their abler students and freely doubt the value of the courses offered. Yet the very size of the enterprise makes it difficult to ignore; indeed, it generates resentment. (p. 46).

Nevertheless, the actual size of this faculty commitment to teacher education remains a mystery because of the dispersed, all-university nature of the program. It is everyone's and no one's responsibility, and its power thus remains diffused.

While these leading institutions respond to the competitive environment by moving from teacher education into fields where they are stronger players, that option is not open to many programs, for the colleges and universities where they reside not only expect them to stay in business, but also expect them to maintain high enrollments. In an effort to maintain enrollments with a declining student population, those in charge of programs are tempted to lower standards.

Empirical evidence on the effects of this competition is provided by Schlechty and Vance (1983a), who studied the institutional origins of two groups of entrants into the teacher work force in North Carolina. They found great differences in the institutions they studied. The competitive marketplace exerted more pressure at some institutions than others. The

researchers concluded that "some institutions of higher education have been much more dependent than others on teacher education as a source of enrollment" (p. 95).

The teacher education programs that maintained high standards throughout the low-demand period were housed in institutions that allow scores on standardized tests to play a significant role in admissions decisions. These teacher education programs were not encouraged to offset declining enrollments with low-scoring students. But other institutions allowed their standards to drop, allowing in some cases twice as many students from the lowest quintile to enter teaching. According to Schlechty and Vance (1983a), the set of programs permitting this to happen were housed in institutions of higher education that were lacking

> rigorous overall admissions standards, and thus the teacher-training programs were able to admit more low scoring students when high scoring students chose majors other than teacher education. (p. 96).

They found, in fact, between 1973-74 and 1979-80 over a 20 percent increase in the market share of employed teachers from the lowest quintile of academically inclined college graduates. Lest the invidious conclusion be drawn that this represents a major increase in minority teachers, it should be noted that of the 1,242 employed teachers scoring in this lowest quintile, 172 were black teachers and 1,070 were white. It should also be noted that these 1,242 teachers were employed at the same time the United States had an excess of available talented teacher candidates.

While Schlechty and Vance (1983a) found that the type of institution did not significantly influence the decline in talent from the top quintile of high scoring teachers, the type of institution did significantly influence the proportional increase in graduates from the bottom quintile of low scoring teachers. Supporting the observations of Judge (1982),

Sykes (1983), Kerr (1983) and Weaver (1983), Schlechty and Vance (1983a) concluded

> Competition for scarce resources (i.e., students) both among departments within institutions and among institutions is having an impact on the quality and quantity of teachers being produced by various institutions. (p. 98)

The pressure to maintain enrollments can be understood in terms of the roles teachers play in university life. Drawing on the work of Judge (1982) and Kerr (1983), Sykes (1983a) suggests that "the latent functions that teacher education serves within the university thoroughly confound its manifest mission" (p. 90). As Sykes (1983a) observes,

> On campus after campus, especially in the large public universities, teacher education provides a valuable source of income for the university at large, because state funding rewards enrollment, while allocation formulas favor every professional school and department but teacher education. (p. 90)

Hence, enrollments must be kept up.

A second latent function that teacher education programs serve is that of a holding company for students at the low end of the ability distribution. At a time when higher education enrollments are on the decline nationwide (Dearman & Plisko, 1980, 1981, 1982) and a number of institutions are admitting more students from among the less academically inclined (Schlechty and Vance, 1983), "it is a distinct relief to all other schools and departments on campus" (Sykes, 1983a, p. 90) to have such a resource available. This form of institutional pressure, in Sykes' view (1983a), "militates against both the elimination of teacher education and the raising of entrance standards (which would decrease enrollment)" (p. 90).

This effect of teacher education's serving this second latent function at the university is possibly the most detrimental of all, for it creates what Sykes (1983a) dramatically refers to as an "intellectual ghetto" with the following predictable and ironic qualities:

> Rather than forestall further slippage in the talent pool for teaching, such programs actually become part of the problem, serving as disincentives to bright students, who shun association with a major stigmatized as anti-intellectual. (p. 90)

Against this backdrop, it is easier to understand some of the likely reasons that institutions of higher education insist on maintaining an all-university approach to teacher education. The resistance to allowing schools, departments, or colleges of education to control their own destiny is not fully imbedded in authentic concern for quality teacher education and teaching quality in the nation's elementary and secondary schools. Just as the teacher education curriculum was originally constructed to accommodate low-level, technical-skill orientations tailored for noncareer, transient members of a teaching force, so are the institutional governance arrangements now locked into keeping teacher education in a state of organizational poverty and intellectual dependence.

The School Community and Support for Teacher Education

Much of the research on teacher education suggests that the dominance of practice over scholarship is supported by the belief that teachers learn good teaching mainly from experience. Hence it is important to examine schools as places in which teachers gain on-the-job experience and to ask whether the conditions that comprise this experience are in fact conducive to becoming more knowledgeable about and better at teaching.

The professional development of practicing teachers is influenced by many factors. Certainly, the ways in which the teacher's work is defined and experienced affect teachers' motivation to continue learning to teach more effectively and to contribute to their field. Schools also influence

the quality and scale of continuing teacher education through the distribution of resources and the organization of opportunity: The allocation of time, space, materials, and staff responsibilities helps to determine whether continued learning is an integral part of the obligations, opportunities, and activities of teachers.

If there are contradictions between professional ideals and workplace realities, opportunities for long-term learning by teachers are thereby undermined. In interviews with women teachers, Spencer-Hall (1982) explored the conflict that teachers perceive between exhortations to be professional and the working conditions they encounter in their schools.

The influence that teachers exert in their own classrooms contrasts with their relative powerlessness in the organization at large. The picture drawn is of a work environment that is isolated yet crowded, intellectually arid, short on time and space, compartmentalized and yet not autonomous, and lacking in any obligation to contribute to the solution of institutional problems. New teachers, in particular, are left to their own devices. In such schools--and some would argue, in the profession at large--there is no tradition by which the ablest members of the group are recognized for their contributions to the fund of knowledge and skill for the profession.

Teachers have not been organized "to promote inquiry or to add to the intellectual capital of the profession" (Lortie, 1975, p. 56). Yet, accompanying this depressing picture of professional isolation among experienced teachers and trial-and-error learning by beginning teachers are descriptions of a few exceptional schools or districts that have been organized to give high priority to continuing professional development and to offer direct assistance to those just learning to teach.

Lack of career stages that advance learning. In contrast to certain other occupations (including teaching at the university level), in which full membership in the profession is achieved in well marked stages, elementary and secondary school teaching has been relatively "careerless" (Dalton, Thompsons, & Price, 1977; Lortie, 1975; Sykes, 1983). Little distinction is made between newcomers and others. In the responsibilities they assume and the opportunities and rewards available to them, novice teachers are virtually indistinguishable from their more experienced colleagues. The implicit assumption is that neither the daily work of teaching nor the structure of career opportunities requires extended training and support.

Little premium is placed on cumulative mastery or professional initiative in a career that offers few rewards and opportunities based on evolving skill, sophistication, and professional standing. Efforts to characterize teachers' career stages (Christensen, 1983; Fuller & Bown, 1975) might be more accurately seen as work to describe teachers' intellectual and social accommodation to a noncareer. Since nothing in the traditional view of teaching has led researchers to emphasize "learning to teach" as a long-term enterprise with implications for career advancement, proposals to produce career ladders could subsequently and substantially alter the research agenda on teacher education (Schlecty, 1984).

Lack of support for entry into teaching. Entry into the work of teaching has been described as "abrupt" or "unstaged," with first-year teachers assuming the full responsibilities of the classroom from their very first day. The various portraits of the first year are remarkably consistent, whether drawn from the retrospective accounts of experienced teachers (Little, 1981; Lortie, 1975) from interviews and journals of beginning teachers (Fuchs, 1969; Ryan, 1970; Zeichner, 1983) or from

descriptions of teacher induction programs (McDonald, 1980; Tisher, 1980; Zeichner & Tabachnick, 1982).

For most teachers, learning by experience has been fundamentally a matter of learning alone, an exercise in unguided and unexamined trial and error. Organized inservice assistance is "measured in days and hours instead of weeks and months" (Lortie, 1975). This abrupt entry into teaching conveys the impression that teaching can be mastered in a relatively short period by persons acting independently with good sense and sufficient stamina. Researchers looking for organized programs and support and assistance during induction have been disappointed (McDonald, 1980; Zeichner, 1982). Such programs are small in number and have been unable consistently to demonstrate their superiority to the common pattern of "sink or swim" (Tisher, 1980).

Meaningful mentoring relations between experienced and beginning teachers have been the exception, not the rule (Little, 1981). Mentoring allows for mediated career entry in which novices move gradually from simple to more demanding tasks and from modest to substantial responsibility, all under the supervision of acknowledged masters whose skill and longevity have earned them status within the occupation. Mentors are in a position to transmit valued knowledge and skill, to socialize newcomers to the institutional culture, and to influence future career opportunities. In most schools, mentoring arrangements tend to be isolated, informal agreements; there is no necessary corresponding institutional agreement to lighten the load--to make the beginner's job easier by insuring "good" classes and limited additional duties (but see Tisher's (1980) description of systematic induction activities in Britain and Australia).

Lack of collegial support for continued learning. Whatever the provisions for induction, some workplace conditions are more conducive to

professional development than others. In one study of six elementary and secondary schools, norms of collegiality and experimentation in three schools moved teaching from a private to a public enterprise. Schools in which teachers (a) routinely talked to one another about teaching, (b) were regularly observed at their work, and (c) participated in shared planning and preparation were also schools in which teachers expected to learn from and with one another on a regular basis (Little, 1981).

In a follow-up study of five secondary schools, teachers in two "avid" schools had been accorded substantial latitude for developing and testing curriculum ideas. Interested teachers joined study groups with the sole purpose of "getting smarter," and with no immediate obligation to implement new practices in the classroom. Eventually, discussions evolved into agreements to try out selected practices in classrooms, sometimes culuminating in well-designed field experiments involving skills training, special curricula, and comparison groups (Bird & Little, 1983). By teachers' reports, collegial work adds to the pool of available ideas and materials, the quality of solutions to curricular problems, and teachers' own confidence in their collective and individual ability to refine their work.

Involvement in professional development with colleagues stands in marked contrast to more typical involvements that are passive, brief, fragmented, and intellectually narrow. In Lortie's five-town survey, only 25 percent of the teachers reported "much contact" with fellow teachers in the course of their work. Almost half reported "no contact."

Research confirms that collaboration among teachers is fragile and frequently undermined by conditions of work. In a review of teamwork among teachers, Cohen (1981) reported that teaming was relatively unstable and short-lived in schools and that true "instructional interdependence" was

rare. In a study of the effects of in-classroom coaching of teachers learning new classroom methods, Showers (1983) found that joint planning was the most valued of the coaching arrangements, but was not commonly practiced in schools. Coaching was not consistent with established workplace values, habits, and schedules. Similarly, Shultz and Yinger (1982) found that their teachers' work situations did not permit use of collaborative problem-solving approaches that teachers had come to admire during inservice course work. When examining administrators' influence on teachers' professional norms, Bird and Little (1983) discovered that collegial norms were most solidly established when a "policy" of collaborative work was given material support in the form of time, space, supplies, and assigned staff.

Lack of effective formal arrangements for continued learning. If the conditions of work and norms of collegiality do not provide an adequate basis for teachers to continue to learn about their work and vocation, it might be thought that formal programs for staff development would have high priority. But, perhaps because teaching is not viewed as a long term career, the opposite tends to be the case. Professional development programs have been found to be programmatically isolated and politically weak (Moore & Hyde, 1981; Schlecty & Crowell, 1983). Staff development is not tied to the central obligations, opportunities, and rewards of work in the district, school, or profession; it offers few career rewards to those who emerge as its leaders. "Those who run staff development," Schlecty and Crowell (1983:49) point out, "seldom run schools."

In the three districts studied by Moore and Hyde (1981), responsibility for staff development was well down in the hierarchy. Staff development directors often operated with staffs of two or three, organizationally isolated from other key curriculum and program offices. At that level it is difficult to launch initiatives (i.e., to generate ideas rather than working

on the ideas imposed by others), to protect them, and to grant them adequate stability and support; the programs are therefore vulnerable to varied and rapidly changing priorities at higher organizational levels (Schlecty & Whitford, 1983). Activities often operated in separate divisions and were accountable to different assistant or associate superintendents.

Responsibility for staff development was widely scattered with little attempt at coordination. From one third to more than one half of the program offices in each district engaged in staff development. Staff development leaders in each of these offices tended to be unaware of the activities of their counterparts in other offices, even when those activities placed demands of time and energy on the same teachers. For most, staff development was a secondary activity, a mechanism for carrying out other primary responsibilities.

Thus the research evidence suggests that staff development has not generally been the product of coherent policy, nor has it been systematically integrated with institutional priorities for curriculum and instructional improvement. Moore and Hyde worry aloud that "commitment to staff development that is focused on specific problems is much different from a commitment to a general scheme for the improvement of instruction." (p.110. The findings from the Vacca, Barnett, and Vacca (1982) study of professional development in six districts are similar. Administrators in only two of the six districts described a structural connection between professional development and program or teacher evaluation; in both of these instances, the connection was narrowly oriented toward the "remediation" of individual teachers rather than toward coordination of program improvement initiatives.

In many districts, staff development has grown in importance, but not in quality. McLaughlin and Marsh (1979) argue that the increased importance of

staff development in the later 1970s can be traced in part to an impressive array of attempted reforms that fell short of their intended aims due in part to lack of training and assistance and in part to declining enrollments that left many districts with a corps of tenured, experienced staff. In the absence of coordination or supervision, and pressed by multiple external demands to be almost all things to almost all people, districts assembled a patchwork collection of diverse activities, rather than an orchestrated program of professional development and program improvement (Goodlad, 1984; Little, 1981; Moore & Hyde, 1981; Weinshank, Trumbull & Daly, 1983).

Ironically, the lack of effective continuing teacher education in schools is partly attributable to the absence of teachers educated for a professional teaching career that includes committed attention to district policies. If more teachers gave serious attention to the organization of district staff development programs, those programs would have greater chance for success. But districts have typically taken a needs-assessment approach to involving teachers in planning staff development, leading to a fragmented program geared to the noncareer teacher. Involvement of teachers in the planning and design of professional development programs has been largely symbolic, infrequent, and inconsequential (Moore & Hyde, 1981).

Districts' inability to balance widespread decision-making authority for professional development with substantive program direction appears unintentionally but quite systematically to erode teachers' interest in and commitment to organized programs. Themselves teachers, Weinshank, Trumbull, and Daly (1983) combine insights drawn from their own experiences with interviews of teachers and program specialists to illustrate and analyze precisely such problems of orchestration and integration. In particular, they expose some of the dilemmas associated with insecure and fleeting federal funds and the mismatch between federal regulations and teachers'

judgments. But these problems, too, are not new. Referring to the cyclical mounting of inservice programs in response to educational innovations a decade ago, Cogan (1973) observed:

> It is evident that these "boom-bust-boom-bust" sequences tend to reduce teachers to a cynicism that saps their commitment to professional improvement. . . What they need is more careful long-term planning for longer phases of their school-based efforts. They need programs rather than fads and episodes. (p. 225)

For teachers, involvement in professional development must compete with a host of other interests and obligations. Cusick (1983), in a description of staff relations in secondary schools, unravels a complex web of teachers' activities and involvements in and out of school. Scheduled inservice offerings take second or third place behind sponsored student activities and clubs, second jobs, independently owned businesses, community or church activities, and family obligations.

The teachers' center movement stands as an exception to this lack of commitment, having been organized precisely to ensure teachers' influence over the content and process of continuing education and over conditions of participation (Feiman, 1978; Leiter & Cooper, 1979). However, while some centers have engaged teachers in probing investigations of fundamental problems of teaching and learning, on the whole such centers have not exerted widespread influence over the day-to-day working environments from which their participants come and to which they return (McLaughlin & Marsh, 1979).

Another alleged constraint on teachers' commitment to the accumulation and dissemination of knowledge is the union movement. Based on their two-year study of collective bargaining in California and Illinois, Mitchell and Kerchner (1983) suggest that a move toward a "laboring" definition of teachers' work has been accompanied by an increasing

rationalization of tasks and a move toward closer inspection of classroom performance. A conception of teachers' work that emphasizes "labor" places less weight on teaching as craft, profession, or art--conceptions that have traditionally called forth different views of how to get members of the occupation to learn and perform.

Other research suggests that these criticisms of union contracts have been overstated. Johnson's study (1981) of teacher unions and the schools revealed considerable within-district variation, particularly in arenas of professional development and school improvement. Some teacher unionists have even asserted that professional organizations are taking the lead in teachers' professional development (Leiter & Cooper, 1979). Union sponsorship of teachers' centers and a three-site research and development project to translate classroom-based research into practice through the development of new staff development roles are two examples (Feiman, 1978; Rauth, Biles, Billups, & Veitch, 1983).

The use of monetary rewards for teachers to strengthen staff development is another problematic aspect of organizing teacher commitment. Sykes (1983) suggests that the expectation of pay for participating in continuing education activities operates to isolate professional development from what are perceived to be more central aspects of teachers' work. In addition, incentive pay has been more effective in attracting teachers to inservice sessions than it has in influencing what these teachers do after the sessions. In fact, in the Rand Corporation's four-year Change Agent study, pay for attending inservice sessions was found to be inversely related to classroom implementation of the recommended practices (Berman & McLaughlin, 1978).

In short, this examination of school conditions is consistent with the thesis that teaching has been a relatively short-term, low commitment

occupation that requires little by way of long-term, intensive and coherent educational provisions. From such a perspective neither teacher nor school district could be expected to make the investments necessary for long-term payoffs. Changing work conditions in these respects could make administration of schools more difficult and expensive. For example, assistance for induction could require teachers and administrators to give more attention to the competence and potential of entering teachers. Norms of collegiality could make compatibility an important and difficult criterion in the selection of teachers. More extensive and coherent staff development programs would require giving up the notion that experience by itself is an adequate teacher of teachers. Finally, the lack of progression in the teaching career would have to be confronted and challenged, as indeed it is being challenged in many states today.

The Professional Community and Support for Teacher Education

To some observers, the notion of a profession implies that its members control and determine, at least in part, the circumstances under which novices enter the profession. Thus it is important for research to consider the extent to which and the ways in which professional organizations contribute to and influence teacher education. Unfortunately, there is relatively little research on these organizations that is tightly and insightfully tied to the central issues confronting the faculty, students, and curricula of teacher education as here defined. Work on accreditation and certifiction, however, does provide some evidence that is largely consistent with the arguments that have been made in earlier sections of this analysis.

Program accreditation and approval. Public and private organizations have been given responsibility for monitoring the quality of initial

teacher certification programs. Each state has an agency responsible for granting or withholding approval to college and university programs; completing an approved program is the typical way for teachers to gain entry to the profession. At the national level, the National Council for the Accreditation of Teacher Education (NCATE) is a voluntary organization that awards or denies a stamp of approval to those programs that decide to seek NCATE accreditation.

The ability of either state governments or NCATE to support the preparation of career teachers is restricted by their focus on the lowest quality programs and by questions about their effectiveness even at that level. As indicated earlier, most initial preparation programs for teachers do not provide opportunities for the most able students to prepare for a career in teaching. Yet, both state agencies and NCATE do no more than keep out the worst programs, in contrast to supporting high quality in teacher education. Political pressures on both institutions press them to define "worst" in a way that will permit approval of most programs.

> No matter how committed the leadership of a state education agency may be, it would be politically suicidal for the state government to allow that agency to establish and attempt to maintain accreditation standards higher than it is possible for the vast majority of institutions in the state to meet . . . . NCATE and the regional accrediting associations are hardly in a better position. These bodies have a voluntary membership and exist ultimately at the pleasure of their institutional members. (Clark & Marker, 1975, p. 81)

Standards that the vast majority of institutions can meet are not likely to give strong support to education for a career in teaching.

The small amount of resources available to these agencies makes it difficult for them to be successful even at keeping out the worst programs. Standards for institutions are written in terms of institutional characteristics (e.g., resources in the library, inclusion of courses in specified areas), not qualities of the students completing the program.

Few states have staff to make visits to institutions, so fulfillment of requirements is often checked by examining descriptions written by the programs themselves.

Clark and Marker (1975) make NCATE's accreditation process seem a bit more rigorous, though the small paid staff and extensive use of volunteers for site visits "dictates infrequent visits and routine procedures wherever possible" (p. 69). Wheeler's detailed study of NCATE's accreditation process (Wheeler, 1980) suggests that even this assessment overestimates their ability to enforce their minimal standards.

Although Wheeler found that those involved in the NCATE accreditation process took their work seriously and that many programs benefited from going through the approval process, he also found critical weaknesses. The central difficulty was that accreditation teams, instead of following the requirement that they judge whether a particular function was being performed well, looked only for whether the function was performed at all.

> This "presence-or-absence" approach to applying the Standards is pursued for many reasons, only several of which are summarized here: (1) the Standards are vague, which discourages attempts to judge the quality of programs; (2) institutions have some influence over the information made available to team and Council members, which in turn affects their ability to judge the quality of programs; and (3) the dynamics of team visits and Council meetings virtually preclude in-depth examination of programs. (Wheeler, 1980, p. 6)

For example, one standard requires explicit objectives clearly related to the curriculum. In one case a final decision on this standard was delayed until the last day of the visit so that the institution could develop such objectives. Any program submitting written objectives was judged to have met this standard, without further evidence of links to the curriculum. Programs without written objectives were failed on this standard (Wheeler, 1980, p. 28).

Although NCATE continues to try to improve its operation and many states have recently tightened their program requirements, the

accreditation and program approval process continues to support programs that do no more than prepare teachers for a noncareer. So long as they aim to include virtually all programs, little more can be expected.

Certification. The profession might use the procedures for certifying teachers to support them in acquiring the knowledge and skills appropriate for a career in teaching. But fragmentation and a minimum-standards orientation prevent certification from providing such support.

In her report, "The making of a teacher," Feistritzer (1984) summarizes the current scene: "The certification of classroom teachers in the United States is a mess" (p. 36). Certification requirements vary dramatically, both within a teaching specialty across states and within a state across teaching specialties. Requirements are virtually always specified in terms of courses that must be completed, but the course specifications show little rational order.

In 48 states and the District of Columbia, teachers can be certified merely by completing an approved program. Hence, the certification of most teachers is driven by political pressure to allow the majority of institutions to grant certification to their students. When program approval is the only requirement for certification, the only way in which prospective teachers must demonstrate their preparedness is by passing the required courses. In most states it is even possible to teach without completing the "required" course work. States grant emergency or substandard certificates, in some cases even to students who have not completed four years of college.

Teacher organizations. The teachers' associations--the National Education Association and the American Federation of Teachers--are another important part of the milieu in which teacher education operates. Their growth and strength over the past two decades has raised additional

questions about who speaks for teacher education in the public arena (Clark & Marker, 1975) and may have changed the ways in which teachers continue their education on the job (Mitchell & Kirschner, 1982).

Despite the size and widespread influence of these organizations, little research has been conducted on their effects as part of the milieu of teacher education. Numerous topics need research attention, including the effects of collective bargaining on the public status of the teaching profession, the role teachers' organizations play in controlling how many students enter initial teacher education, the influence of teachers' organizations over set requirements for initial and continuing teacher certification, and the continuing education provided by the organizations themselves.

Summary: Research and the Teacher Education Milieu

Studies of the context of teacher education at both university and K-12 levels convey one overriding impression: Institutional policies, structures, and resources that might be expected to foster the quality of teaching and teacher education appear to do the opposite. Initial and continuing teacher education are poorly served by an institutional apparatus that belies the rhetoric of importance that, in turn, disguises the harsh realities of teaching.

Universities have never made and do not now make investments in teacher education that are commensurate with talk about the importance of teacher education. Overall responsibility and accountability for these programs is absent or nominal. Research shows that the notion of a unified teacher education establishment is a myth and that lack of knowledge about teaching is by no means the sole or perhaps even the main reason for the mediocre quality of teacher education programs. The prevalence of low quality and

the absence of investments to remedy the situation is not surprising, however, when one considers the low status of the client groups (teachers and children), the prevalence of women in the profession of teaching, and the current lack of public support for measures to reduce these inequalities.

The world of elementary and secondary schools has not offered a more positive environment for learning to teach. Although many would say that teachers learn best from experience, there is a growing body of researchs to show that the typical experience of teachers in school is noneducative at best and miseducative at worst. Staff development programs that might overcome the limitations of on-the-job experience are neither adequately organized nor sufficiently supported to meet the needs of career teachers.

Various professional organizations have been called on to fill these gaps. As yet none does, although teacher organizations show increasing commitment to playing a role in both initial and continuing teacher education.

In the meantime, the teacher education system, now under heavy public criticism, has limited capability to resist reform. Reform, however, can be negative or positive in its consequences. To avoid repeating the mistakes that have so often been repeated in the past, clarity about and understanding of the nature of the problem is essential. This review of research on teacher education suggests that political circumstances and scholarly considerations may be converging to provide more opportunities for improvement than heretofore has been the case.

Summary: Interrelated Obstacles to Quality Teacher Education

This chapter reviews studies that potentially inform policies and practices in initial and continuing teacher education--studies of teacher educators, studies of prospective and experienced teachers, studies of the teacher education curriculum, and studies of the milieu in which teacher education takes place. Across these four areas, mutually reinforcing factors explain why teacher education has been kept from being as academic and intellectual as it probably deserves to be, and why change is likely to be slow.

Although a number of academically talented persons pursue careers in teaching and teacher education, they remain proportionally underrepresented. Many teachers and teacher educators come from home and family backgrounds whose academic roots are often shallow and that therefore are not likely to engender strong and ingrained intellectual propensities. Persons with low measures of academic talent are allowed to dominate the field. As a result, teacher education tends to be easy and non-intellectual.

Initial and continuing teacher education goes on in an environment that makes it difficult to be scholarly and remain in teacher education. Those with a strong academic leaning find few compatriots in colleges or schools. Prospective teachers find little intellectual challenge in their professional training and subsequently are isolated in school classrooms where low levels of knowledge are again reinforced, the rewards of work dwindle over the years, and the motivations to learn more about teaching are few. Academically capable college faculty find greater rewards when they place increasing distance between themselves and teacher education.

The de-intellectualization of teacher education feeds on itself; the capable are discouraged from entering teacher education by what they see there. But other aspects of the milieu also operate to maintain the character of teacher education. Low status keeps the power to organize change out of the hands of those closest to the field. Teachers are often used only as symbols or themselves assign teacher education low priority. Researchers set themselves up as the source of leadership. Diffusion of responsibility leaves no one in charge of programs.

The picture in each domain repeats a pattern that reinforces the maintenance of teacher education as a marginal part of the university community, criticized for its lack of rigor, but discouraged from trying to be anything else. The increasingly clear descriptions of the difficulties in teacher education are themselves evidence that respectable study can be a part of teacher education. But these descriptions also show why change in teacher education, though possible, will be slow and often discouraging.

References

Anderson, C. W. (1982). The use of codified knowledge in five teacher education programs: A comparative analysis (Research Series No. 118). East Lansing: Michigan State University, Institute for Research on Teaching.

Anderson, L., Evertson, C., & Brophy, J. (1979). An experimental study of effective teaching in first grade reading groups. Elementary School Journal, 79, 193-223.

Anyon, J. (1981). Social class and school knowledge. Curriculum Inquiry, 11(1), 3-41.

Arends, R. (1983). Teachers as learners: A descriptive study of professional development activities. A paper presented at the annual meeting of the American Educational Research Association, Montreal.

Ashton, P., Webb, R., & Doda, N. (1982). A study of teachers' sense of efficacy. Unpublished paper. Gainesville: University of Florida.

Astin, A. W. (1981). The American freshman: National norms for fall 1981. Los Angeles: University of California.

Berliner, D. C. (1978). Changing academic learning time: Clinical interventions in four classrooms. A paper presented at the annual meeting of the American Educational Research Association, Toronto.

Berliner, D. C. (1982). Executive functions of teaching. Paper presented at the annual meeting of the American Educational Research Association, New York City.

Berman, P., & McLaughlin, M.W. (1978). Implementing and sustaining innovations: Federal programs supporting educational change (Vol. VIII). Prepared for the U.S. Office of Education, DHEW. Santa Monica: Rand Corporation.

Bestor, A. (1955). The restoration of learning. New York: Knopf.

Beyer, L. E., & Zeichner, K. M. (1982). Teacher training and educational foundations: A plea for discontent. Journal of Teacher Education, 33(3), 18-23.

Bierly, M. B., & Berliner, D. C. (1982). The elementary school teacher as learner. Journal of Teacher Education, 33(6), 37-40.

Bird, T. D., & Little, J. W. (1983). Finding and founding peer coaching. A paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.

Book, C., Byers, J., & Freeman, D. (1983). Student expectations and teacher education traditions with which we can and cannot live. Journal of Teacher Education, 34(1), 9-13.

Borrowman, M. L. (1965a). Liberal education and the professional education of teachers. In M. L. Borrowman (Ed.) Teacher education in America: A documentary history (pp. 1-53). New York, NY: Teachers College Press.

Borrowman, M. L. (Ed.). (1965b). Teacher education in America: A documentary history. New York: Teachers College Press.

Boyer, E. L. (1983). High school: A report on secondary education in America. New York: Harper & Row.

Brophy, J. E. (1980). Teachers' cognitive activities and overt behaviors. East Lansing: Michigan State University, College of Education.

Broudy, H. S. (1980). What do professors of education profess? The Educational Forum, 44(4), 441-451.

Buchmann, M. (1983a). Argument and conversation as discourse models of knowledge use (Occasional Paper No. 68). East Lansing: Michigan State University, Institute for Research on Teaching.

Buchmann, M. (1983b). Role over person: Justifying teacher action and decisions (Research Series No. 135). East Lansing: Michigan State University, Institute for Research on Teaching.

Buchmann, M. (1984). The use of research knowledge in teacher education and teaching. American Journal of Education, 92(4), 421-439.

Buchmann, M. & Schwille, J. (1983). Education: The overcoming of experience. American Journal of Education, 92 (1), 30-51.

Bureau of Educational Research. (1983). Program design for the Virginia Beginning Teacher Assistance Program. Charlottesville: University of Virginia, School of Education.

Bureau of Labor Statistics (1980). Occupational projections and training data, 1980 edition. Washington, DC: U.S. Department of Labor.

Christensen, J., Burke, P., Fessler, R., & Hagstrom, D. (1983). Stages of teachers' careers: Implications for professional development. Washington, DC: ERIC Clearinghouse on Teacher Education.

Clark, D. L., & Marker, G. (1975). The institutionalization of teacher education. In K. Ryan (Ed.), Teacher education (74th Yearbook of the National Society for the Study of Education, Part 2, pp. 53-86). Chicago: University of Chicago Press.

Cogan, M. L. (1973). Clinical supervision. Boston: Houghton-Mifflin.

Cohen, E. (1981). Sociology looks at team teaching. In R. G. Corwin (Ed.), Research in sociology of education and socialization, Vol. 2: Research on educational organizations (pp. 163-193). Greenwich, CT: JAI Press.

Coladarci, T., & Gage, N. L. (1984). Effects of a minimal intervention on teacher behavior and student achievement. American Educational Research Journal, 21 (3), 539-555.

Conant, J. B. (1963). The education of American teachers. New York: McGraw-Hill.

Crawford, J., Gage, N. L., Corno, L., Stayrook, N., Mitman, A., Schunk, D., Stallings, J., Baskin, E., Harvey, P., Austin, D., Cronin, D., & Newman, R. (1977). An experiment on teaching effectiveness and parent-assisted instruction in the third grade. Stanford, CA: Center for Educational Research at Stanford.

Crocker, A. C. (1974). Predicting teaching success. Atlantic Highlands, NJ: NFER Publishing, distributed by Humanities Press.

Cruickshank, D. R., & Broadbent, F. W. (1968). The simulation and analysis of problems of beginning teachers. Brockport: New York State University College. (ERIC Document Reproduction Service No. 024-637)

Cusick, P. A. (1981). A study of networks among professional staffs in secondary schools. Educational Administration Quarterly, 17(3), 114-138.

Cusick, P. A. (in press). Essay review: Managers of virtue, by D. Tyack & E. Hansot. National Academy of Education. In press.

Cusick, P. A. (1973). Inside high school. New York: Holt, Rinehart & Winston.

Cusick, P. A. (1983). The egalitarian ideal and the American high school: Studies of three schools. New York: Longman.

Dalton, G. W., Thompson, P. H., & Price, R. L. (1977, Summer). The four stages of professional careers: A new look at performance by professionals. Organizational Dynamics, (5), 19-42.

Dearman, N. B., & Plisko, V. W. (1980; 1981; 1982). The condition of education: Statistical report. Washington, DC: National Center for Education Statistics.

Dearmin, E. T. (1982). University teacher education councils: Report to executive committee and faculty. Las Vegas: University of Nevada, College of Education.

Dewey, J. (1904). The relation of theory to practice in education. Reprinted in M. L. Borrowman (Ed.), Teacher education in America: A documentary history (pp. 140-171). New York: Teachers College Press, 1965.

Doyle, W. (1977). Learning the classroom environment: An ecological analysis. Journal of Teacher Education, 28(6), 51-55.

Doyle, W., & Ponder, G. A. (1977-78). The practicality ethic in teacher decision making. Interchange, 8(3), 1.

Ducharme, E. R., & Agne, R. M. (1982). The educational professorate: A research-based perspective. Journal of Teacher Education, 33(6), 30-36.

Eddy, E. M. (1969). Becoming a teacher: The passage to professional status. New York: Teachers College Press.

Edgar, D. E., & Brod, R. L. (1970). Professional socialization and teacher autonomy. Stanford, CA: Stanford Center for Research and Development in Teaching. (ERIC Document Reproduction Service No. ED 046-885).

Emmer, E., Evertson, C., & Anderson, L. (1980). Effective management at the beginning of the school year in junior high classes. Austin: University of Texas, Research and Development Center for Teacher Education.

Everhart, R. (1984). Reading, writing, and resistance. London: Routledge & Kegan Paul.

Feiman, S. (Ed.). (1978). Teacher centers: What place in education? Chicago: University of Chicago Center for Policy Study.

Feiman-Nemser, S. & Buchmann, M. (1983) Pitfalls of experience in teacher Education. In P. Tamir, A. Hofstein, & Ben-Peretz, M. (Eds.) Preservice and inservice education of science teachers. Philadelphia, PA: Balaban International Science Services.

Feistritzer, C. E. (1983a). The American teacher. Washington, DC: Feistritzer Publications.

Feistritzer, C. E. (1983b). The condition of teaching: A state-by-state analysis. Princeton: The Carnegie Foundation for the Advancement of Teaching.

Feistritzer, C. E. (1984). The making of a teacher: A report on teacher education and certification. Washington, DC: National Center for Educational Information.

Fenstermacher, G. D. (1978). A philosophical consideration of recent research on teacher effectiveness. In L. S. Shulman (Ed.) Review of research in education, Vol. 6. Itasca, IL: F. E. Peacock Publishers.

Fenstermacher, G. D. (1980). On learning to teach effectively from research on teacher effectiveness. In C. Denham & A. Lieberman (Eds.), Time to learn. Washington, DC: National Institute of Education.

Finkelstein, B. (1982). Technicians, mandarins, and witnesses: Searching for professional understanding. Journal of Teacher Education, 33 (3), 25-27.

Floden, R. E. (in press). The role of rhetoric in changing teachers' beliefs. Teaching and Teacher Education.

Floden, R. E., Buchmann, M. & Schwille, J. R. (1984). The case for the separation of home and school. Paper presented at the annual meeting of the American Educational Research Association, New Orleans.

Floden, R., & Feiman, S. (1981). A developmental approach to the study of teacher change: What's to be gained? (Research Series No. 93). East Lansing: Michigan State University, Institute for Research on Teaching.

Fox, R. (1957). Training for uncertainty. In R. Merton, G. G. Reader, & P. L. Kendall (Eds.), The student physician: Introductory studies in the sociology of medical education (pp. 207-241). Cambridge: Harvard University Press.

Frankel, M. M., & Gerald, D. E. (1982). Projections of education statistics to 1990-91, Vol. 1. Washington, DC: U. S. Department of Education, National Center for Education Statistics.

Fuchs, E. (1969). Teachers talk: Views from inside city schools. Garden City, New Jersey: Doubleday.

Fullan, M. (1982). The meaning of educational change. New York: Teachers College Press, Columbia University.

Fuller, F. F. (1970). Personalized teacher education for teachers: An introduction for teacher educators. Austin, TX: Research and Development Center for Teacher Education (ERIC Document Reproduction Service No. ED 048-105).

Fuller, F. F. & Bown, O. (1975). Becoming a teacher. In K. Ryan (Ed.), Teacher education: Seventy-fourth yearbook of the National Society for the Study of Education (Part 2) (pp. 25-52). Chicago: University of Chicago Press.

Fuller, M. (1969). Concerns of teachers: A developmental conceptualization. American Educational Research Journal, 6, 207-226.

Gage, N. L. (Ed.). (1963). Handbook of research on teaching. Chicago: Rand McNally.

Gall, M. D. (1983). Using staff development to improve schools. R & D Perspectives, Winter 1983, 1-6.

Gall, M., Haisley, F. B., Baker, R. G., & Perez, M. (1982). The relationship between inservice education practices and productivity of basic skills instruction. Eugene: University of Oregon, Center for Educational Policy and Management.

Geer, B. (1968). Occupational commitment and the teaching profession. In H. S. Becker, B. Geer, D. Riesman, & R. S. Weiss (Eds.), Institutions and the person. Chicago: Aldine.

Gallup, G. H. (1983). The 15th annual Gallup poll of the public's attitudes toward the public schools. Phi Delta Kappan, 65(1), 33-47.

Getzels, J. W., & Jackson, P. W. (1963). The teacher's personality and characteristics. In N. L. Gage (Ed.), Handbook of research on teaching. Chicago: Rand McNally.

Golladay, M.A., & Noell, J. (1978). The condition of education: 1978 edition. (NCES Statistical Report.) Washington, DC: U.S. Government Printing Office.

Good, T. L., & Grouws, D. A. (1981). Experimental research in secondary mathematics classrooms: Working with teachers. (Final report). Columbia: University of Missouri.

Good, T. L. & Grouws, D. A. (1979). The Missouri Mathematics Effectiveness Project: An experimental study in fourth-grade classrooms. Journal of Educational Psychology, 71 (3), 355-362.

Goodlad, J. (1984). A place called school. New York: McGraw-Hill.

Grant, W. V., & Eiden, L. J. (1982). Digest of education statistics 1982. Washington, DC: National Center for Education Statistics.

Greene, M. (1979). Teaching: The question of personal reality. In A. Lieberman & L. Miller (Eds.), Staff development: New demands, new realities, new perspectives (pp. 23-35). New York: Teachers College Press.

Griffin, G. (1982). Staff development. A paper prepared for the National Institute of Education Invitational Conference, Research on Teaching: Implications for Practice, Airlie House, Virginia. Washington, DC: National Institute of Education.

Griffin, G., & Hukill, H. (Eds.). (1983). First years of teaching: What are the pertinent issues? Austin: University of Texas, Research and Development Center in Teacher Education.

Guba, E. G., & Clark, D. L. (1978). Levels of R & D productivity in schools of education. Educational Researcher, 7(5), 3-9.

Hogan P. (1983). The central place of prejudice in the supervision of student teachers. Journal of Education for Teaching, 9(1), 30-45.

Howsam, R. B., Corrigan, D. C., Denemark, G. W., & Nash, R. J. (1976). Educating a profession: Report of the Bicentennial Commission on Education for the Profession of Teaching. Washington, DC: American Association of Colleges for Teacher Education.

Hoy, W. (1967). Organizational socialization: The student teacher and pupil control ideology. Journal of Educational Research, 61, 153-155.

Hoy, W. K., & Rees, R. (1977). The bureaucratic socialization of student teachers. Journal of Teacher Education, 28(1), 23-26.

Iannaccone, L. (1963). Student teaching: A transitional stage in the making of a teacher. Theory into Practice, 2, 73-80.

Jackson, P. (1968). Life in classrooms. New York: Holt, Rinehart & Winston.

Johnson, S. M. (1981). Teacher unions and the schools. Cambridge: Harvard University, Institute for Educational Policy Studies.

Joyce, B., & Clift, R. (1984). The Phoenix agenda: Essential reform in teacher education. Educational Researcher, 13(4), 5-18.

Joyce, B., & Showers, B. (1981). Teacher training research: Working hypotheses for program design and directions for future study. A paper presented at the annual meeting of the American Educational Research Association, Los Angeles.

Joyce, B., Yarger, S., & Howey, K. R. (1977). Preservice teacher education. Palo Alto, CA: Consolidated Publications.

Judge, H. (1982). American graduate schools of education: A view from abroad. (A report to the Ford Foundation). New York: Ford Foundation.

Kaestle, C. D. (1983). Pillars of the republic. New York: Hill & Wang.

Katz, L. (1980). A matrix for research on teacher education. In E. Hoyle & J. Megarry (Eds.), The professional development of teachers (World yearbook of education, pp. 283-292). London: Kogan Page.

Katz, L., & Raths, J. D. (1982). The best of intentions for the education of teachers. Action in Teacher Education (Special issue: The role of research in education), 4(1), 8-16.

Kepler, K. B. (1980). BTES: Implications for preservice education of teachers. In C. Denham & A. Lieberman (Eds.). Time to learn (pp. 139-157). Washington, DC: U.S. Department of Education, National Institute of Education.

Kerr, D. H. (1983). Teaching competence and teacher education in the United States. In L. S. Shulman & G. Sykes (Eds.), Handbook of teaching and policy (pp. 126-149). New York: Longman.

Koerner, J. D. (1963). The miseducation of American teachers. Boston: Houghton-Mifflin.

Kohn, M. L. (1969). Class and conformity: A study in values. Homewood, IL: Dorsey Press.

Kohn, M. L., & Schooler, C. (1982). Job conditions and personality: A longitudinal assessment of their reciprocal effects. American Journal of Sociology, 87(6), 1257-1286.

Lacey, C. (1977). The socialization of teachers. London: Methuen.

Lanier, J. E. (1984). The future of teacher education: Two papers (Occasional Paper No. 79). East Lansing: Michigan State University, Institute for Research on Teaching.

Lanier, J. (1983). Tensions in teaching teachers the skills of pedagogy. In G. Griffin (Ed.), Staff development: Eighty-second yearbook of the National Society for the Study of Education (pp. 118-153). Chicago: University of Chicago Press.

Lanier, J. E., & Floden, R. E. (1978). Research and development needs for the advancement of teacher education (Research Series No. 8). East Lansing: Michigan State University, Institute for Research on Teaching.

Lanier, P. E., & Henderson, J. E. (1973). The content and process of teacher education: A critique and a challenge. New Directions for Education (Special issue: Preparing and qualifying for admission to teaching), 1(2), 1-102.

Learned, W. S., & Wood, B. D. (1938). The student and his knowledge (Bulletin No. 29). New York: Carnegie Foundation for the Advancement of Teaching.

Leiter, M., & Cooper, M. (1979). How teacher unionists view inservice education. In A. Lieberman & L. Miller (Eds.), Staff development: New demands, new realities, new perspectives (pp. 107-125). New York: Columbia University, Teachers College Press.

Lightfoot, S. L. (1983). The lives of teachers. In L. S. Shulman & G. Sykes (Eds.), Handbook of teaching and policy (pp. 241-260). New York: Longman.

Lines, A. A. (1982). To raise myself a little: The diaries and letters of Jennie, a Georgia teacher, 1851-1886. (T. Dyer, Ed.). Athens: University of Georgia Press.

Little, J. W. (1981). School success and staff development: The role of staff development in urban desegregated schools. Boulder, CO: Center for Action Research, Inc.

Lortie, D. (1975). Schoolteacher. Chicago: University of Chicago Press.

MacAleese, R. (1976). A note on the free-wheeling effect in non-supervised microteaching students. Research Intelligence, 2(1), 20-22.

Masland, S. W., & Williams, R. T. (1983, July/August). Teacher surplus and shortage: Getting ready to accept responsibilities. Journal of Teacher Education, 34(4), 6-9.

Mattingly, P. H. (1975). The classless profession. New York: New York University Press.

McCune, S. D. (1977). The organized teaching profession and education R and D (Occasional Paper No. 29). Columbus, Ohio: Center for Vocational Education.

McCutcheon, G. (1982). What in the world is curriculum theory? Theory Into Practice, 21(1), 18-22.

McDonald, F. J. (1980). Study of induction programs for beginning teachers, Vol. I: The problems of beginning teachers: A crisis in training. Princeton: Educational Testing Service.

McFaul, S., & Cooper, J. (1983). Selected outcomes of implementing peer clinical supervision in an elementary school. A paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.

McKeachie, W. J. (1963). Research on teaching at the college and university level. In N. L. Gage (Ed.), Handbook of research on teaching (pp. 1118-1172). Chicago: Rand McNally.

McLaughlin, M. W., & Marsh, D. D. (1979). Staff development and school change. In A. Lieberman & L. Miller (Eds.), Staff development: New demands, new realities, new perspectives (pp. 69-94). New York: Columbia University, Teachers College Press.

McNeil, L. M. (1982). Contradictions of control: The organizational context of school knowledge (Final report). Madison: Wisconsin Center for Public Policy.

Merton, R. K., Reader, G. G., & Kendall, P. L. (Eds.). The student-physician: Introductory studies in the sociology of medical education. Cambridge, MA: Harvard University Press.

Mitchell, D. E., & Kerchner, C. T. (1983). Labor relations and teacher policy. In L. Shulman & G. Sykes (Eds.), Handbook on teaching and policy (pp. 214-238). New York: Longman.

Mohlman, G. G. (1983). A study of inservice training, teacher characteristics, and teacher change. A paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.

Moore, C. (1979, November/December). National survey queries early clinical experiences. ATE Newsletter, 12, 3.

Moore, D. R., & Hyde, A. A. (1981). Making sense of staff development: An analysis of staff development programs and their costs in three urban school districts. Chicago: Designs for Change.

Morris, J. E. (1983). The director of student teaching/field experiences: Characteristics and responsibilities. The Teacher Educator, 18(4), 11-18.

Murphy, R. (1979). Sociological theories of education. Toronto: McGraw-Hill Ryerson Ltd.

National Education Association. (1982). Status of the American public school teacher, 1980-81. Washington, DC: National Education Association.

Nemser, S. (1983). Learning to teach. In L. S. Shulman & G. Sykes (Eds.), Handbook of teaching and policy. New York: Longman.

Orr, P. G., & Peseau, B. A. (1979, October). Formula funding is not the problem in teacher education. Peabody Journal of Education, 57(1), 61-71.

Peck, R. F., & Tucker, J. A. (1973). Research on teacher education. In R. Travers (Ed.), Second handbook of research on teaching (pp. 940-978). Washington, DC: American Educational Research Association.

Pelikan, J. (1983). Scholarship and its survival: Questions on the idea of graduate education. Princeton, NJ: Carnegie Foundation for the Advancement of Teaching.

Peseau, B. A. (1982). Developing an adequate resource base for teacher education. Journal of Teacher Education, 33(4), 13-15.

Peseau, B. A., & Orr, P. G. (1979). An academic and financial study of teacher education programs through the doctoral level in public state universities and land-grant colleges. University, AL: University of Alabama, College of Education.

Peseau, B. A., & Orr, P. G. (1981). Second annual academic and financial study of teacher education programs in senior state universities and land-grant colleges, 1978-79. Montgomery: University of Alabama, College of Education.

Peseau, B. A., & Orr, P. G. (1980). The outrageous underfunding of teacher education. Phi Delta Kappan, 62(2), 100-102.

Plisko, V. W. (1983). The condition of education, 1983 edition: Statistical report. Washington, DC: U. S. Department of Education, National Center for Education Statistics.

Popkewitz, T. S., Tabachnik, R. B., & Zeichner, K. (1979). Dulling the senses: Research in teacher education. Journal of Teacher Education, 30(5), 52-60.

Porter, S. (1983-84, Winter). Seeking equity in the workplace. Wingspread Journal, p. 2. Racine, WI: The Johnson Foundation, Inc.

Powell, A. G. (1980). The uncertain profession. Cambridge, MA: Harvard University Press.

Powell, A. G. (1976, October). University schools of education in the twentieth century. Peabody Journal of Education, 54(1), 3-20.

Pratt, L. K., DeLucia, S. W., & Uhl, N. P. (1979). A study of predictors of National Teachers Examination scores at a predominantly black institution. Paper presented at the Annual Forum of the Association for Institutional Research, San Diego. (ERIC Document Reproduction Service No. ED 174-117).

Prichard, K. W., Fen, S. N., & Buxton, T. H. (1971). Social class origins of college teachers of education. Journal of Teacher Education, 22(2), 219-228.

Pyke, S. W. (1975). Children's literature: Conceptions of sex roles. In R. Pike & E. Zureik (Eds.), Socialization and values in Canadian society, 2, (pp. 51-73). Toronto: McClelland & Stewart.

Rauth, M., Biles, B., Billups, L., & Veitch, S. (1983). Educational research and dissemination program. Washington, DC: American Federation of Teachers.

Rehberg, R. A., & Rosenthal, E. R. (1978). Class and merit in the American high school: An assessment of the revisionist and meritocratic arguments. New York: Longman.

Royce, J. (1891). Is there a science of education? Reprinted in M. L. Borrowman (Ed.), Teacher education in America: A documentary history (pp. 100-127). New York: Teachers College Press, 1965.

Ryan, K. (1970). Don't smile until Christmas: Accounts of the first year of teaching. Chicago: University of Chicago Press.

Sarason, S. B., Davidson, K. R., & Blatt, B. (1962). The preparation of teachers. New York: Wiley.

Schlechty, P. C. (1984). A school district revises the functions and rewards of teaching. A paper presented at the annual meeting of the American Educational Research Association, New Orleans.

Schlechty, P. C., & Crowell, D. (1983). Understanding and managing staff development in an urban school system. Chapel Hill: University of North Carolina.

Schlechty, P. C., & Vance, V. S. (1981). Do academically able teachers leave education? The North Carolina case. Phi Delta Kappan, 63, 106-112.

Schlechty, P. C., & Vance, V. S. (1983a, September). Institutional responses to the quality/quantity issue in teacher training. Phi Delta Kappan, 65, 94-101.

Schlechty, P. C., & Vance, V. S. (1983b). Recruitment, selection, and retention: The shape of the teaching force. The Elementary School Journal, 83, 469-487.

Schlechty, P. C., & Whitford, B. L. (1983). The organizational context of school systems and the functions of staff development. In G. Griffin (Ed.), Staff development (Eighty-second yearbook of the National Society for the Study of Education, pp. 62-91). Chicago: University of Chicago Press.

Schwab, J. J. (1969). College curriculum & student protest. Chicago: University of Chicago press.

Schwab, J. J. (1978). Science, curriculum, and liberal education. (I. Westbury & N. J. Wilkof, Eds.). Chicago: University of Chicago Press.

Showers, B. (1983). The transfer of training: The contributions of coaching. Eugene: Research and Development Center for Educational Policy and Management.

Shultz, J., & Yinger, R. (1982). Developing inquiry skills in teachers: Some reflections on the improvement of practice. A paper presented at the annual meeting of the American Educational Research Association, New York.

Silberman, C. (1970). Crisis in the classroom. New York: Random House.

Spencer-Hall, D. A. (1982). Teachers as persons: Case studies of the lives of women teachers: Final report. Warrensburg: Central Missouri State University.

Stayrook, N., Cooperstein, R. A., & Knapp, M. (1981). The characteristics of Teacher Corps staff development programs and their effectiveness. Menlo Park, CA: SRI International.

Stones, E. (1984). Supervision in teacher education: A counseling and pedalogical approach. London: Methuen.

Stones, E., & Morris, S. (1972). Teaching practice: Problems and perspectives. London: Methuen.

Sweet, J. A., & Jacobsen, L. A. (1983). Demographic aspects of supply and demand for teachers. In L. S. Shulman & G. Sykes (Eds.), Handbook of teaching and policy (pp. 192-213). New York: Longman.

Sykes, G. (1983a). Contradictions, ironies, and promises unfulfilled: A contemporary account of the status of teaching. Phi Delta Kappan, 65(2), 87-93.

Sykes, G. (1983b). Public policy and the problem of teacher quality: The need for screens and magnets. In L. Shulman & G. Sykes (Eds.), Handbook of teaching and policy (pp. 97-125). New York: Longman.

Sykes, G. (1984, January). The deal. The Wilson Quarterly 8(1), 59-77.

Tabachnick, B. R., Popkewitz, T. S., & Zeichner, K. M. (1979-80). Teacher Education and the professional perspectives of student teachers. Interchange, 10 (4), 12-29.

Temple, C. M., & Riggs, R. O. (1978, July). The declining suitability of the formula approach to public higher education. Peabody Journal of Education, 55(4), 351-357.

Tisher, R. (1980). The induction of beginning teachers. In E. Hoyle & J. Megarry (Eds.), The professional development of teachers (World yearbook of education, pp. 69-84). London: Kogan Page.

Travers, R. M. W. (Ed.) (1973). Second handbook of research on teaching. Chicago: Rand McNally.

Trent, J. W., & Cohen, A. M. (1973). Research on teaching in higher education. In R. M. W. Travers (Ed.), Second handbook of research on teaching (pp. 997-1071). Chicago: Rand McNally.

Trow, M. (1968, May/June). Bell, book, and Berkeley. The American Behavioral Scientist, 11(5), 43-48.

Turner, R. L. (1975). An overview of research in teacher education. In K. Ryan (Ed.) Teacher education (74th Yearbook of the National Society for the Study of Education, Part 2, pp. 87-110). Chicago: University of Chicago Press.

Tyack, D. B (1967) Turning points in American educational history. Waltham, MA: Blaisdell Publishing Co.

Vacca, J., Barnett, L. J., & Vacca, R. T. (1982). Establishing criteria for staff development personnel: Final report. Troy, NY: Russell Sage College.

Vance, V. S., & Schlechty, P. C. (1982, September). The distribution of academic ability in the teaching force: Policy implications. Phi Delta Kappan, 64(1), 2-27.

Veenman, S. (1984, Summer). Perceived problems of beginning teachers. Review of Educational Research, 54(2), 143-178.

Waller, W. (1932). The sociology of teaching. New York. Russell & Russell (Reissued 1961).

Warren, D. (1982). What went wrong with the foundations and other off-center questions. Journal of Teacher Education, 33 (3), 28-30.

Weaver, W. T. (1983). America's teacher quality problem: Alternatives for reform. New York: Praeger Publishing Co.

Weaver, W. T. (1979). In search of quality: The need for talent in teaching. Phi Delta Kappan, 61(1), 29-32+.

Weaver, W. T. (1981, February). The tragedy of the commons: The effects of supply and demand on the education talent pool. Paper presented at the meeting of the American Association of Colleges of Teacher Education, Detroit, MI. (ERIC Document Reproduction Service No. ED 204-261)

Wegner, C. (1978). Liberal education and the modern university. Chicago: University of Chicago Press.

Weinshank, A. B., Trumbull, E. S., & Daly, P. L. (1983). The role of the teacher in school change. In L. Shulman & G. Sykes (Eds.), Handbook of teaching and policy (pp. 300-314). New York: Longman.

Wheeler, C. (1980). NCATE: Does it matter? (Research Series No. 92). East Lansing: Michigan State University, Institute for Research on Teaching.

Williams, R. T. (1983). Teacher shortages--some proposed solutions. American Education, 19(3), 47-51.

Williams, R. T. (1981). Beneath the surface of the mathematics teacher shortage. Mathematics Teacher, 74(9), 691-694.

Willis, P. (1980). Learning to labour. Hampshire, England: Gower Publishing Company.

Wolfe, P. (1984). Implementation of the Hunter Instructional Model: A staff development study. A paper presented at the annual meeting of the American Educational Research Association, New Orleans.

Zeichner, K. M. (1981). Reflective teaching and field-based experience in teacher education. Interchange, 12(4), 1-22.

Zeichner, K. M. (1983). Individual and institutional factors related to the socialization of teaching. In G. Griffin & H. Hukill (Eds.), First years of teaching: What are the pertinent issues? Austin: University of Texas, Research and Development Center for Teacher Education.

Zeichner, K. M. (1980). Myths and realities: Field-based experiences in pre-service teacher education. Journal of Teacher Education, 31 (6), 45-55.

Zeichner, K. M., & Tabachnick, B. R. (1981). Are the effects of university teacher education "washed out" by school experience? Journal of Teacher Education, 32(3), 7-11.

Zeichner, K. M., & Tabachnick, B. R. (1982) The belief systems of university supervisors in the elementary student teaching program. Journal of Education for Teaching, 8(1), 34-54.

Zeichner, K. M., & Tabachnick, B. R. (1984). The development of teacher perspectives: Social strategies and institutional control in the socialization of beginning teachers. Madison: University of Wisconsin.

Zeigler, H. (1967). The political life of American teachers. Englewood Cliffs, NJ: Prentice-Hall.

Zumwalt, K. K. (1982). Research on teaching: Policy implications for teacher education. In A. Lieberman & M. W. McLaughlin (Eds.) Policy making in education. (81st Yearbook of the National Society for the Study of Education, Pt. 1), (pp. 215-248). Chicago: University of Chicago Press.